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October 1966
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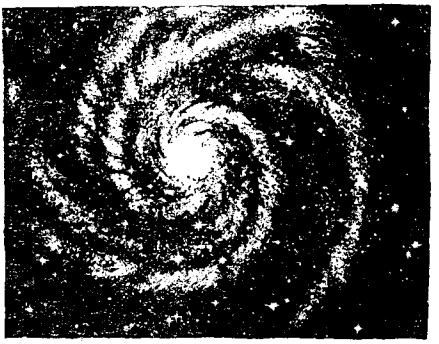

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HOW THE HEROES DIE

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CAUSES

What would you say caused World War I?

School children learn: "The First World War was caused by the assassination of the Archduke Ferdinand at Sarajevo . . ." Military historians think it was because of the German General Staff's erroneous appraisal of its strategy and strength. Others tell us it was because of Germany's need for colonies . . . or because the build-up of armies went so far that sooner or later they were bound to be used.

Four different "causes", you see. But which of them was *the* cause?

There's an important new book which casts light on this question. The name of it is *Philisophical Foundations of Physics,* by Rudolf Carnap, and it was called to our attention by its editor, Martin Gardner, a favor for which we are grateful.

Does it answer the question raised above? Not exactly . . . but in the way we have come to expect scientific progress to resolve questions, it disposes of it all the same — not by answering it, but by showing we are asking the wrong question.

Carnap is a philosopher, and one of the characteristics of that trade is that its best practitioners are less interested in making you agree with their conclusions than they are in having you come to conclusions of your own. It is our conclusion (not necessarily Carnap's) that to look for the "causes" of real-world events, and particularly of human events, is much like attempting to isolate the demons which inhabit lunatics.

As Carnap says — speaking not of human events, but of science: "Exactly what does the cause-and-effect relation mean? In everyday life, the concept is certainly a vague one. Even in science, it is often not clear what a scientist means when he says that one event has 'caused' another . . . It is easy to see how men of primitive cultures could suppose that elements in nature were animated, as they themselves were, by souls that willed certain things to happen."

A great deal of scientific thought is carried on by means of model-making. Some gifted people doubt the propriety of this — there are dangers

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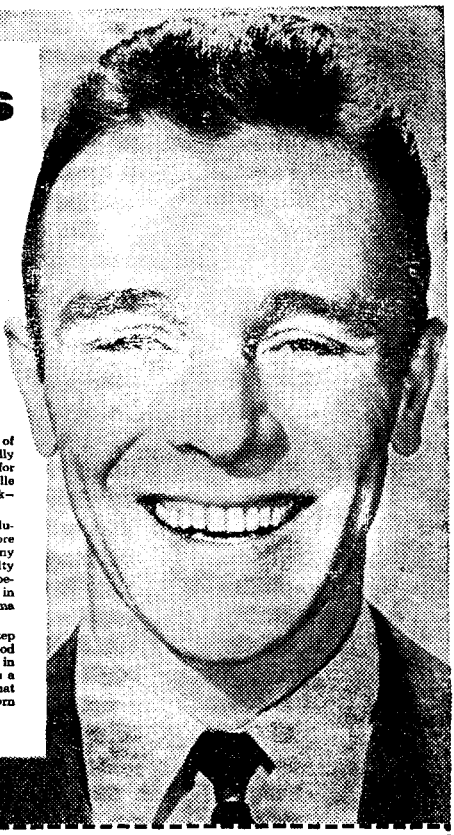
"Look who's smiling now!"



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in confusing the model with the real thing — but the process still goes on, very usefully and attractively, as it has since Euclid wrote his *Elements* 2200 years ago. With a mathematical model, or a logical model, or a geometric model we can perform whatever operations we like and be sure that the results will follow logically and causually from our assumptions.

But this is only possible because our assumptions are by definition true. We don't need to test them against observed "fact", because logical modalities are all the "fact" we need for logical systems. In this way we can make the calculation that out of a suitably large number of spins of a balanced coin, half will be heads and half will be tails. (If we make the actual test and find the results come out wrong, so powerful is the model that we at once realize the coin could not have been "balanced".) Similarly we deduce that the sum of the angles of a triangle must be exactly 180°. We might test it, if we wish to — Carl Gauss is supposed to have tried it with three mountains in Germany — but even if we were to find a discrepancy it would not interfere with the workings of the model. High-school students would still be able to do their trig homework according to the same Euclidean laws.

But of course, if we found out that large triangles were different from those we experience in daily life in that respect, we might begin to suspect that there was not really a one-to-one correspondence between model and reality. And so there is not. Logical modalities do not necessarily operate in the real world. As Einstein said, "So far as the theorems of mathematics are about reality, they are not certain. And so far as they are certain, they are not about reality."

So what caused World War I? Well, that's a question we're not prepared to answer definitely. But we have a notion that it was caused largely by causality. People in authority, making models, imposing concepts of causality on the real world of human events, came to certain conclusions about what would happen *if*.

Turned out they were wrong. Things didn't happen as they planned — and a great many people died in the collapse of their models.

And we have a notion, too, that if World War III comes, it may come about in much the same way. —THE EDITOR

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PART ONE

THE PALACE OF LOVE

by JACK VANCE

Illustrated by MORROW

Kirth Gersen was pledged to murder the man he hated . . . especially the one whose cruelest weapon was love!

I

When one asked Kirth Gersen to explain the drives which led him across the galaxy, he found it difficult. He was gentle . . . but he was a killer. He was urbane, informed and cultured . . . but he was remorseless. To questions about the seeming contradictions of his character, he would respond:

"There's really no mystery. I've been trained to a certain

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function. It's all I know. To justify the training, to fulfill my life, I exercise the function. It's as simple as that."

To one who knew the general outlines of Gersen's past, this explained much. The five "Demon Princes" joining for the historic raid on Mount Pleasant had destroyed or enslaved five thousand men and women. Among the handful of survivors were Rolf Gersen and his young grandson. Such an experience must alter anyone's life; yet others had known tragedy and terror but were not changed, felt neither rage nor hate.

"My grandfather felt the rage and hate," Kirth Gersen would reply in rather a flippant tone of voice. "So far as I'm concerned the hate is abstract."

This could be even more disturbing to a questioner: "Are you then just a mechanism? This is mindlessness, to be the instrument of someone else's hate!"

The answer — with a grin: "That's not quite accurate. My grandfather trained me or, rather, had me trained, and I am grateful to him. Without the training, I would be dead."

"He must have been a terrible man, so as to warp a child's mind!"

"He was a dedicated man. He loved me and assumed I shared his dedication. I did and I do."

"But what of the future? Is revenge all you want from life?"

" 'Revenge'? I don't think so. I have only one life to live and I know what I hope to achieve."

"But why not try to achieve the same goals through a lawful agency? Isn't this a better way?"

"There isn't any lawful agency. Only the IPCC, which isn't altogether effective."

"Then why not bring the issues before the people of the Concourse, and the other important worlds? You have the energy; you have more than enough money. Isn't this better than killing men with your own hands?"

Then Gersen had no rational counter-arguments. "These aren't my talents," he would say. "I work alone, at what I do best."

II

In the practice of "what he did best" Kirth Gersen approached the planet Aloysius.

Landing formalities at Aloysius were as rigorous as those of Sarkoy were lax. At a distance of a million miles, the "first shell", Gersen announced his intention to land, identified himself and his ship, gave references, explained the reasons for his

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visit and was allowed to approach the "second shell" at a distance of a half million miles. Here he waited while his application was studied, his references checked. He was then ordered down into the "third shell" a hundred thousand miles above the planet, and here, after a brief delay, he was given landing clearance.

The formalities were irksome, but not to be avoided. Had Gersen neglected to halt at the first shell, weapons would have been trained on his ship. Had he failed to heed the second shell, a Thribolt gun would have fired a salvo of adhesive paper disks at his ship. He had then failed to halt, he and his ship would have been destroyed.

Gersen complied with all necessary regulations, received clearance and landed at the Dorgan Central Spaceport.

New Wexford lay twenty miles north, a city of crooked streets, steep hills and old buildings of almost medieval aspect. The banks, brokerage houses, exchanges occupied the center of the city, with hotels, shops and agencies on the surrounding hills, and some of the finest private homes in the Oikumene scattered about the surrounding countryside.

Gersen checked into the vast Congreve Hotel, bought newspapers, ate a placid lunch. The life of the city flowed past him: mercantilists in their consciously archaic garb; aristocrats from Boniface, anxious only to return; occasionally a citizen of Cuthbert, conspicuous for the eccentric flair of his garments and his glossy depilated head. Earthfolk at the Congreve could be identified by somber garments and an indefinable self-assurance — a quality the citizens of the outer worlds found exasperating, no less than the geocentric term "outer worlds" itself.

Gersen relaxed. The atmosphere of New Wexford was soothing. Everywhere were reassuring evidences of solidity, good-living, law and order. He liked the steep streets, the stone and iron buildings, which now, after more than a thousand years, could no longer be denigrated as "self-conscious quainterie", the Cuthbertian epithet.

Gersen had paid one previous visit to New Wexford. Two weeks of discreet investigation had pointed to one Jehan Addels of Trans-Space Investment Corporation as an economist of extraordinary resource and acumen. Gersen had called Addels by public telephone, blanking his own image. Addels was a youngish man, slight of body, with a long quizzical face, a balding

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scalp which he had not troubled to have rehaired. "Addels here."

"I am someone you don't know; my name is irrelevant. I believe you are employed by Trans-Space?"

"Correct."

"How much do they pay you?"

"Sixty thousand, plus some fringe benefits," Addels replied without embarrassment, though he was talking to a stranger over a blank screen. "Why?"

"I'd like to hire you in a similar capacity at a hundred thousand, with a monthly raise of a thousand and a bonus every five years of, say, a million SVU."

"The terms are appealing," Addels replied drily. "Who are you?"

"I prefer to remain anonymous," said Gersen. "If you insist, I'll meet you and explain as much as you like. Essentially, what you need to know is that I am not a criminal. The money I want you to handle has not been acquired contrary to the laws of New Wexford."

"Hm. How much is the sum in question? What securities are represented?"

"Ten billion SVU, in cash."

"Whisht!" breathed Jehan Addels. "Where — " a flicker of annoyance crossed his face, and he broke off his sentence: Jehan Addels liked to think of himself as imperturbable. He continued. "This is an extraordinary amount of money. I can't believe it was accumulated by conventional means."

"I haven't said this. The money came from Beyond, where conventions don't exist."

Addels smiled thinly. "And no laws. Hence, no legality. And no criminals . . . Still, the source of your funds is no concern of mine. Exactly what do you wish done?"

"I want the money invested to yield income, but I want to call no attention to the money. I want no rumors, no publicity. I want the money invested without causing even a ripple of notice."

"Difficult." Addels reflected a moment. "Not impossible, however, if the program is properly planned."

"This is at your discretion. You will control the entire operation, subject to an occasional suggestion from me. Naturally you may hire a staff, though the staff is to be told nothing."

"Small problem there. I know nothing."

"You are agreeable to my terms?"

"Certainly, if the whole business is not a hoax. I can't avoid becoming an extremely wealthy

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man, both from my salary and from investments I can make collateral with yours. But I will believe it when I see the money. Presumably it is not counterfeit."

"Your own fake-meter will assure you of this."

"Ten billion SVU," mused Addels. "An enormous sum, which might well be expected to tempt even an honest man. How do you know I won't embezzle from you?"

"I understand that you are not only a cautious man, but a man of discipline. Also, you should have no inducement to embezzle. Otherwise I have no safeguards."

Jehan Addels gave his head a crisp nod. "Where is the money?"

"It will be delivered wherever you like. Or you can come to the Congreve Hotel and pick it up yourself."

"The situation is not all that simple. Suppose I should die overnight? How would you recover your money? If you should die, how would I learn of the fact? What disposition would I then make of this vast sum, presuming that it exists?"

"Come to Suite 650 at the Congreve Hotel. I'll give you the money, and we'll make arrangements for any immediate contingencies."

Jehan Addels appeared in Gersen's suite half an hour later. He inspected the money which was contained in two large cases, checked a few of the notes with his fake-meter, and shook his head in awe. "This is a tremendous responsibility. I could give you a receipt, but it would be a meaningless formality."

"Take the money," said Gersen. "Tomorrow, include in your will an instruction that in the event of your death the money is mine. If I die, or if I do not communicate with you within a year, use the income for charitable purposes. But I expect to be back in New Wexford within two or three months. Hereafter, I will communicate with you only by telephone, using the name Henry Lucas."

"Very well," said Addels, rather heavily. "I think this takes care of all contingencies."

"Remember, absolute discretion! Not even your family must know the details of your new occupation."

"As you wish."

The next morning Gersen departed Aloysius for Alphanor; now, three months later, he was back in New Wexford, again at the Congreve Hotel.

Going to a public telephone, blanking the screen as before, he tapped out Jehan Addels's call-number. The screen burst

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into a pattern of green leaves and pink briar roses. A female voice spoke: "Braemar Investment Company."

"Mr. Henry Lucas to speak to Mr. Addels."

"Thank you."

"Addels's face appeared on the screen. "Addels."

"This is Henry Lucas."

Addels leaned back in his chair. "I am happy — and I may say relieved — to hear from you."

"The line is clear?"

Addels checked his anti-eavesdrop meter and blinker light. "All clear."

"How are matters progressing?"

"Well enough." Addels proceeded to describe his arrangements. He had paid the cash into ten numbered accounts in as many banks, five in New Wexford, five on Earth, and was gradually converting the cash into income-producing investments, using enormous delicacy to avoid sending tremors along the sandpapered nerves of the financial world.

"I had not comprehended the magnitude of the job when I undertook it," said Addels. "It is simply staggering! Mind you, I am not complaining! I could not ask for a more interesting or more challenging job. But investing ten billion SVU discreetly is like jumping into water without getting wet. I am putting together a staff merely to handle details of investigation and management. Eventually, for maximum efficiency, I think we will be forced to become a bank, or perhaps several banks."

"Whatever is most appropriate," said Gersen. "In the meantime I have a special job for you."

Addels instantly became wary. "And what is this job?"

"Recently I've been reading that the Radian Publishing Company, which publishes *Cosmopolis*, is in financial difficulties. I would like you to buy control."

Addels pursed his lips. "I can do this without difficulty, of course. In fact, I can buy outright. Radian is on the verge of bankruptcy. But you should know that, as an investment, this is not an attractive buy. They have been losing money steadily for years, which of course is why they can be had so easily."

"In this case we will buy as a speculation and try to put things right. I have a particular reason in wishing to own it."

Addels hastily disavowed any intent to act counter to Gersen's wishes. "I merely want you to be under no misapprehensions. I will start acquiring Radian stock tomorrow."

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III

Murchison's Star, Sagitta 203 in the *Star Directory*, lay out in the galactic plane behind Vega, thirty light-years beyond the Pale. It was one of a cluster of five vari-colored suns: two red dwarfs, a blue-white dwarf, a peculiar unclassifiable blue-green star of medium size and a yellow-orange G6, which was Murchison's Star. Murchison, the single planet, was somewhat smaller than Earth, with a single huge continent cincturing the world. A searing wind blew dunes around the equatorial zone, mountainous highlands sloped gradually to the polar seas. In the mountains lived aborigines, black creatures of unpredictable characteristics. By turns they were murderously savage, torpid, hysterical or cooperative. In the latter mood they served a useful purpose, supplying dyes and fibers for the tapestries which were one of Murchison's principal exports.

The factories which produced the tapestries were concentrated about the city Sabra and employed thousands of female operatives. These were supplied by a dozen slaving concerns, chief among whom was Gascoyne the Wholesaler. By virtue of efficient inventory control Gascoyne was able to give his customers efficient service at reasonable prices. He made no effort to compete with the specialty houses and dealt mainly in slaves in the Industrial and Agricultural classifications. At Sabra his principal business was in Industrial F-2 Selecteds: women unprepossessing or past the first bloom of youth, but warranted to be of good health and agility, cooperative, diligent and amiable. Such were the terms of Gascoyne's Ten-Point Guaranty.

In two such slaves, Kirth Gersen hoped to find a clue to another of the Demon Princes.

Sabra, on the shore of the north polar sea, was a drab haphazard city with a heterogeneous population whose main goal was to earn sufficient money to go elsewhere. The coastal plain to the south was studded with hundreds of peculiar volcanic stubs, each crowned with a bristle of liver-colored vegetation.

Sabra's single distinction was Orban Circus, an open area at the heart of the city centered on one of these volcanic stubs. The Grand Murchison Hotel occupied the crest of the stub; around the circus were the most important establishments of the planet: Wilhelm's Trade Hotel, the Tapestry Mart; the depot of Gascoyne the Wholesaler, Odenour's Technical Academy, Cady's Tavern, the Blue Ape Hotel, the

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Hercules Import Company, the warehouse and showroom of the Tapestry Producer's Cooperative, the Sportsman Supply and Trophy House, Gambel's Space-Ship Sales, the District Victualling Company.

Sabra was a city large enough and wealthy enough to need protection from raiders and freebooters, even though it fulfilled a service to the folk who lived beyond the Pale. Thribolt batteries were constantly manned by members of the City Militia, and ships coming in from space were regarded with intense suspicion.

Gersen, approaching with circumspection, radioed down to the spaceport and was directed into a landing orbit. At the spaceport he was subjected to interrogation by members of the local Deweaseling Brigade, who were reassured by Gersen's Pharaon. Weasels — the agents of the IPCC — uniformly traveled space in Locater 9B's; these were the only ships the IPCC chose to risk Beyond.

Gersen for once could afford to be candid. He stated that he had come to Sabra to locate a woman brought here twenty or more years before by Gascoyne the Wholesaler. The Deweaselers, watching the pips and bulbs on their truth machine, exchanged sardonic glances, amused by this excess of quixotry, and waved Gersen forth to the freedom of the city.

The time was midmorning. Gersen registered at the Grand Murchison Hotel on top of the Orban Stub, which was crowded almost to capacity with tapestry buyers, commercial salesmen from the Oikumene and sportsmen intent on stalking the Bower Mountain aborigines.

Gersen bathed and changed into a local costume of scarlet plush pantaloons and a black jacket. Descending to the dining room he ate a lunch of local sea produce: seaweed salad, a dish of local molluscs. Directly below was the depot and offices of Gascoyne the Wholesaler: a rambling structure of three stories enclosing a central courtyard. An enormous pink and blue sign across the facade read:

GASCOYNE'S MART
Select Slaves for any Purpose

with a pair of handsome women and a stalwart man depicted below. At the bottom of the sign a message read: *Gascoyne's 10-Point Warranty is Justly Famous!*

Gersen finished his lunch, descended to the circus and started to walk over to Gascoyne's Mart.

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He was lucky enough to find Gascoyne himself available and was ushered into a private office. Gascoyne was a handsome, well-built man of indeterminate age, with dark curly hair, a dashing black mustache, expressive eyebrows. His office was simple and informal, with a bare floor, an old wooden desk, an information screen showing evidence of much use. On one wall hung a plaque with Gascoyne's famous ten-point guaranty limned in gold leaf and surrounded by scarlet festoons.

Gersen explained the purpose of his visit. "About twenty-five years ago, give or take five years, you visited Sarkovy, where you bought a pair of women from a certain Kakarsis Asm. Their names were Inga and Dundine. I am anxious to locate these women. Perhaps you would be good enough to search them out in your records."

"Gladly," said Gascoyne. "I can't say as I recall the circumstances, but — " He went to the information bank, worked the knobs and dials a moment, evoking flashes of blue light and a sudden grinning visage which flickered away. Gascoyne shook his head despondently. "Might as well be a stone for all the use it gives me. I must have it repaired . . . Well, we shall see. This way, if you please." He took Gersen into a back room lined with ledgers. "Sarkovy. I go there seldom. A pestilent world, the home of a wicked race!" He searched his ledgers, one year after another. "This must be the trip. So long ago! Thirty years! Now, let us look. My, my, how this old ledger brings back the memories! 'Good old days' is not just a banality . . . What were the names again?"

"Inga, Dundine. I don't know their last names."

"No matter. Here they are." He copied numbers upon a slip of paper, went to another ledger, turned to the numbers in question. "They were both sold here on Murchison. Inga went to Qualag's Factory. You know where that is? Third along the right bank of the river. Dundine went to Juniper Factory, across the river from Qualag's. I trust these women were not friends or relatives? Like any other, my business has its disagreeable aspects. At Qualag's and Juniper the women live wholesome productive lives, but certainly they are not pampered. Still, who is in this life?" And raising his eyebrows, he made a deprecatory gesture around his austere office.

Gersen gave his head a wry shake of sympathy. He thanked Gascoyne and departed.

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Qualag's Factory was a half-dozen four-story buildings around a compound. Gersen entered the lobby of the main office, which was hung with sample tapestries. A pallid male clerk with varnished blond hair came to inquire his business.

"Gascoyne tells me," said Gersen, "that thirty years ago Qualag's purchased a female named Inga, on your invoice 10V623. Can you tell me if this woman is still employed by you?"

The clerk shuffled off to search his records, then went to an intercom and spoke a few words. Gersen waited. Into the office came a tall placid-faced woman with heavy arms and legs.

The clerk said petulantly: "Gentleman here wants to know about Inga, B2-AG95. There's a yellow card on her with two white clips but I can't find the reference."

"You're looking under Dormitory F. The B2's are all Dorm A." The woman located the correct reference. "Inga. B2-AG95. Dead. I remember her very well. An Earthwoman giving herself all style of airs. Complained constantly of this and that. She came to the dye-works while I was recreation counsellor. I remember her well. She worked in blues and greens, and it put her off; she finally threw herself into a vat of dusty-orange. That's long ago. My, how time flies."

Leaving Qualag's, Gersen crossed the river by a bridge and walked to the Juniper Factory, which was somewhat larger than Qualag's. The office was similar, though with a brisker atmosphere.

Gersen again put his question, this time in connection with Dundine. But the clerk was not cooperative and refused to check the records. "We aren't allowed to give out such information," said the clerk, looking disdainfully at Gersen from the altitude afforded him by his position behind the counter.

"Let me discuss the matter with the manager," said Gersen.

"Mr. Plusse owns the factory. If you will be seated I will announce you." Gersen went to examine a tapestry ten feet wide by six feet high, representing a flowered field on which stood hundreds of fanciful birds.

"Mr. Plusse will see you, sir."

Mr. Plusse was a small surly man with a white top-knot and eyes of blue agate. Clearly he had no intention of obliging Gersen or anyone else. "Sorry, sir! We have our production to consider. Trouble enough with the women as it is! We do our best for them; we provide good food and recreational facilities,

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bathe them once a week. Still it's impossible to keep them satisfied."

"May I ask if the woman still works for you?"

"It makes no difference if she does or not. You would not be allowed to disturb her."

"If she is here, if she is the woman I am looking for, I'll be glad to recompense you for any inconvenience."

"Hmf. Just a moment." Mr. Plusse spoke into the intercom. "Is not there a Dundine in wicker-stitching? What's her current index? . . . Hmf . . . I see." He returned to Gersen, whom he now regarded in a thoughtful new light. "A valuable employee. I can't have her badgered. If you insist on speaking to her, you'll have to buy her. The price is three thousand SVU."

Without a word Gersen put down the money. Mr. Plusse licked his small pink mouth. "Hmf." He spoke into the intercom. "With a minimum of commotion, bring Dundine to this office."

Ten minutes passed, while Mr. Plusse ostentatiously made notations on a chart. The door opened; the clerk entered with a large-bodied woman in a white smock. Her features were big and moist; her hair short, mouse brown, crimped and tied with string. Wringing her hands apprehensively she stared from Mr. Plusse to Gersen and back again."

"You are leaving our service," said Mr. Plusse in a dry voice. "This gentleman bought you."

Dundine looked at Gersen with bright fear. "Oh, what do you plan to do with me, sir? I'm useful and well here! I do my work. I don't want to go out on the back farms. I wouldn't want to do this, and I'm too old for barge work."

"Nothing like that, Dundine. I've paid Mr. Plusse off, you're a free woman now. You can go back to your home if you like."

Tears sprang into her eyes. "I don't believe it."

"It's true."

"But — why did you do this?" Dundine's face wavered between bewilderment and fear.

"I want to ask you a few questions."

Dundine turned her back, bent her head over her hands.

After a moment Gersen asked, Is there anything you want to bring with you?"

"No. Nothing. If I was wealthy I'd take that little tapestry on the wall, the little girls dancing. I did the wickering on that tapestry and I was all that fond of the thing."

"What is the price?" Gersen asked Mr. Plusse.

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"That is our Style 19, which is priced at 750 SVU."

Gersen paid 750 SVU and took the tapestry. "Come, Dundine," he said shortly. "Best that we start off."

"But my good-bys! My dear friends!"

"Impossible," said Mr. Plusse. "Do you wish to disturb the other women?"

Dundine sniffed and rubbed her nose. "There's my bonuses I haven't taken. It's three recreation half-periods. I'd like to give them to Almerina."

"That can't be done, as you know. We never allow transfers or bartering of bonus units. If you wish, you may use them now, before your departure."

Dundine looked uncertainly toward Gersen. "Do we have time? It seems a shame to let them go to waste . . . but I suppose it makes no difference now."

They walked along the river road back toward the center of town, with Dundine casting timid glances toward Gersen.

"I can't imagine what you want of me," she said tremulously. "I'm certain I've never known you in my life."

"I'm interested in what you can tell me of Viole Falushe."

"Viole Falushe? But I know no such person. I can tell you nothing." Dundine stopped short, her knees shaking. "Are you going to take me back to the factory?"

"No," said Gersen hollowly. "I won't take you back." He looked at her in deep discouragement. "Aren't you the Dundine who was kidnapped with Inga many years ago?"

"Oh yes. I'm Dundine. Poor Inga. I've never heard of her since she went to Qualag's. They say it's ever so dreary at Qualag's."

Gersen's mind raced back and forth. "You were kidnapped and brought to Sarkovy?"

"Yes, indeed, and oh, what a time we had! Riding the steppes on those bouncing old wagons!"

"But the man who kidnapped you and brought you to Sarkovy — that was Viole Falushe, or so I am told."

"*Him!*" Dundine's mouth twisted as if she had bitten into something sour. "His name wasn't Viole Falushe!"

And Gersen belatedly recalled that his informant, Kakarsis Asm, had told him the same. The man who had sold Inga and Dundine had not used the name "Viole Falushe" at that time.

"No, no," said Dundine in a soft voice, looking far back down her life. "That wasn't any Viole Falushe. It was that nasty little Vogel Filschner."

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IV

All the way back into the Oikumene, in fragments and ejaculations, bits from here, oddments from there, Dundine told her story, and Gersen gave over trying to elicit a connected narrative.

Expansive, inflated with freedom, Dundine talked with enthusiasm. She knew Vogel Filschner — yes, indeed! She knew him well. So he changed his name to Viole Falushe? Small wonder, after the shame his mother must feel. Though Madame Filschner had never enjoyed the best of reputations, and no one had ever known Vogel Filschner's father. He had attended school with Dundine, two classes ahead.

"Where was this?" asked Gersen.

"Why, at Ambeules!" declared Dundine, surprised that Gersen did not already know the story as well as herself. Though Gersen knew Rotterdam, Hamburg and Paris, he had never visited Ambeules, a suburb of Rolingshaven on the west coast of Europe.

Volgel Filschner had always been a strange, brooding boy, according to Dundine. "Extremely sensitive," she confided. "Ripe always for a great rage or eyefuls of tears. One never knew what Vogel might do!" And for a space she fell silent, shaking her head in marvel at the deeds of Vogel Filschner. "Then when he was sixteen, and I but fourteen, a new girl came to school. Oh, she was a pretty thing! Jheral Tinzy was her name, and who but Vogel Filschner should fall in love!"

But Vogel Filschner was grubby and unsavory. Jheral Tinzy, a girl of sensitivity, found him repulsive. "Who could blame her?" mused Dundine. "Vogel was an eerie boy. I can see him yet: tall for his age, and somewhat thin, with a round belly and a round bottom, like a billiken. He walked with his head to the side, watching all with his dark burning eyes! They watched, they saw all, they never forgot a thing — Vogel Filschner's eyes! I must say that Jheral Tinzy used him heartlessly, laughing and gay the while! She drove poor Vogel to desperation, this is my belief. And that man Vogel took up with — I can't recall his name. He wrote poetry, very strange and daring. He was thought ungodly, though he had patrons in the upper classes. Those days so long ago, so tragic and so sweet! Ah, if I could live them again, what changes there would be!"

At this point Dundine went into a nostalgic reminiscence. "Even now I can smell the air

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from the sea! Ambeules, our old district, is on the Gaas, and this is the loveliest part of the city, though by no means the richest. The flowers are unimaginable! To think that I have seen no flowers for thirty years, except for those I myself worked." And now nothing must do but that Dundine should examine her tapestry which she had draped upon the back bulkhead of the saloon.

Presently she returned to the subject of Vogel Filschner. "The most morbidly sensitive of youths! The poet egged him on. And truth to tell, Jheral Tinzy humiliated Vogel dreadfully. Whatever the cause, Vogel performed his terrible deed. There were twenty-nine girls in the choral society. Every Friday night we sang. Vogel had learned to operate a spaceship — it was a course all the boys took. So Vogel stole one of those little Locater ships, and when we came out from choral practice to the bus, it was Vogel who drove us away. He took us to the spaceship and made us all get aboard. But it was the one night Jheral Tinzy had not come to practice. Vogel had no knowledge of this until the last girl left the bus, and he was like a stone statue. Too late then! He had no choice but to flee." Dundine sighed. "Twenty-eight girls, pure and fresh as little flowers. How he dealt with us! We knew he was strange, but ferocious as a wild beast? No, never. How could we girls imagine such things? For reasons best known to himself he never used us in bed — Inga thought he was sulking because he had failed to capture Jheral. Godelia Parwitz and Rosamond — I can't think of her name — they tried to hit him with a metal implement, though it would have been the death of all had they succeeded, for none of us knew how to guide the ship. He punished them in a dreadful manner so that they cried and sobbed. Inga and I told him he was a wicked monster to act so. He only laughed, did Vogel Filschner. 'A wicked monster, am I? I'll show you a wicked monster!' And he took us to Sarkovy and sold us to Mr. Asm.

"But first he stopped at another world and sold ten girls who were the least well-favored. Then Inga and I and six others who hated him the most were sold on Sarkovy. Of the others, the most beautiful, I know nothing. Thanks to Kalzibah, I have been succored."

Dundine wanted to return to Earth. At New Wexford Gersen furnished her a wardrobe, a ticket to Earth and funds

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sufficient to keep her in comfort the rest of her life. At the spaceport she embarrased him by falling on her knees and kissing his hands. "I thought to die and have my ashes scattered on a far planet! How was I so lucky? With so many other poor creatures, why did Kalzibah select me for his favor?"

The same question, in different terms, had been troubling Gersen himself. With his wealth, he might have bought the whole of Qualag and Juniper and every factory on Sabra and brought each of the wretched women to their homes.

But what then? he asked himself. Sabra tapestries were in demand. New factories would be established, new slaves imported. A year later all would be as before.

Still . . . Gersen heaved a sigh. The universe abounded with evils. No one man could defeat them all. Meanwhile Dundine was wiping her eyes and apparently preparing to fall on her knees once more. Gersen said hastily, "One request I wish to make of you."

"Anything, anything!"

"You plan to return to Rolingshaven?"

"It is my home.' '

"You must not reveal how you were brought from Sabra. Tell no one! Invent any wild tale. But do not mention me. Do not mention that I asked you of Vogel Filschner."

"Trust me! The fiends of hell can tear forth my tongue, even then I will not speak!"

"Good-by then." Gersen departed hastily before Dundine could again demonstrate her gratitude.

At a public telephone he called Braemar Investment Company. "Henry Lucas to speak to Mr. Addels."

"A moment, Mr. Lucas."

Addels appeared on the screen. "Mr. Lucas?"

Gersen allowed his image to go forth. "All continues to go well?"

"As well as could be expected. My problems arise only from the sheer mass of our money. I should say, *your* money." Addels permitted himself to smile. "But gradually I am training an organization. Incidentally, Radian Publishing Company is ours. We had it cheaply, because of the circumstances I mentioned previously."

"No one has been inquisitive? There have been no questions, no rumors?"

"To the best of my knowledge, none. Zane Publishing Company bought Radian; Irwin and Jeddah own Zane; a numbered account at a Pontefract bank owns

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Irwin and Jeddah. Braemar Investment is the numbered account. Who is Braemar Investment? Ostensibly it is I."

"Well done!" said Gersen. "You could not have managed better."

Addels acknowledged the praise with a stiff nod. "I must say once more that Radian seems a poor investment, at least on the basis of past performance."

"Why has it been losing money? Everyone seems to read *Cosmopolis*. I see it everywhere."

"Perhaps this is so. Nevertheless circulation has slowly been declining. More significantly, the typical reader no longer is a decision-maker. The management has been trying to please everyone, including the advertiser. As a result the magazine has lost its flair."

"There would seem to be a remedy for the situation," said Gersen. "Hire a new editor, a man of imagination and intelligence. Instruct him to revitalize the magazine, without regard for advertisers or circulation, sparing no reasonable expense. When the magazine regains its prestige, circulation and advertisers will return fast enough."

"I am relieved that you preface the word 'expense' with 'reasonable'," said Addels in his driest voice. "I still am not accustomed to dealing with millions as if they were hundreds."

"No more am I," said Gersen. "The money means nothing to me, except that I find it uncommonly useful. One other matter. Instruct the *Cosmopolis* head office — I believe it is located in London — that a man named Henry Lucas will be sent to the editorial offices. Represent him as an employee of Zane Publishing if you like. He is to be put on the payroll as a special writer, who will work when and where he chooses, without interference."

"Very well, sir. I will do as you require."

V

Gersen, who had lived nine years on Earth, nevertheless felt something of an outworlder's exhilaration as he hung above the great globe awaiting his clearance from Space Security. Finally it arrived, with precise landing instructions, and Gersen dropped down to the West Europe spaceport at Tarn. He passed through sanitation procedures and health inspection, the most stringent of the Oikumene, punched appropriate buttons at the Immigration Control console and finally was allowed to proceed about his business.

He rode to London by tube and registered at the Royal Oak

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Hotel, a block off the Strand. The season was early autumn; the sun shone through a high thin overcast. Old London, permeated with the vapors of antiquity, shone like a fine gray pearl.

Gersen's clothes were in the Alphanor style, fuller in cut and richer in color than the clothes of London. On the Strand he went into a gentleman's outfitter, where he selected a fabric, then stripped to his underwear and was measured by photonic scanners. Five minutes later he was delivered his new garments: black trousers, a jacket of dark brown and beige, a white blouse and black cravat. Inconspicuous now, Gersen continued along the Strand.

Dusk came to the sky. Every planet had its distinctive dusk, thought Gersen. The dusk of Alphanor, for instance, was an electric blue, gradually fading to the richest of ultramarines. Sarkovy dusk was a dead dismal gray, with a tawny overtone. Dusk at Sabra had been brown-gold, with domains of color around the other stars of the cluster. The dusk of Earth was dusk as it should be: soft, heather-gray, soothing, an ending and a beginning.

Gersen dined at a restaurant which had maintained an unbroken tenancy of over seventeen hundred years. The old oak beams, fumed and waxed, were as stout as ever. The plaster recently had been scraped of twenty layers of white-wash and refinished, a process which occurred every hundred years or so. Gersen's thought reverted to his youth.

He had visited London twice with his grandfather, though for the most part they had lived at Amsterdam. There never had been dinners such as this, never leisure or idleness. Gersen shook his head sadly as he recalled the exercises to which his merciless grandfather had put him. A wonder that he had stood up to the discipline.

Gersen bought a copy of *Cosmopolis* and returned to the hotel. He went into the bar and, sitting at a table, ordered a pint of Worthington's Ale, brewed at Burton-on-Trent as had been the case for some two thousand years. He opened *Cosmopolis* and glanced at the first page.

It was easy to understand why the magazine had become moribund. There were three long articles: *Have Earthmen Become Less Virile? Patricia Poitrine: New Toast of the Smart Set. A Clergyman's Guide to Spiritual Renewal.*

Gersen flicked through the pages, then laid the magazine aside. He drained the mug and went up to his room.

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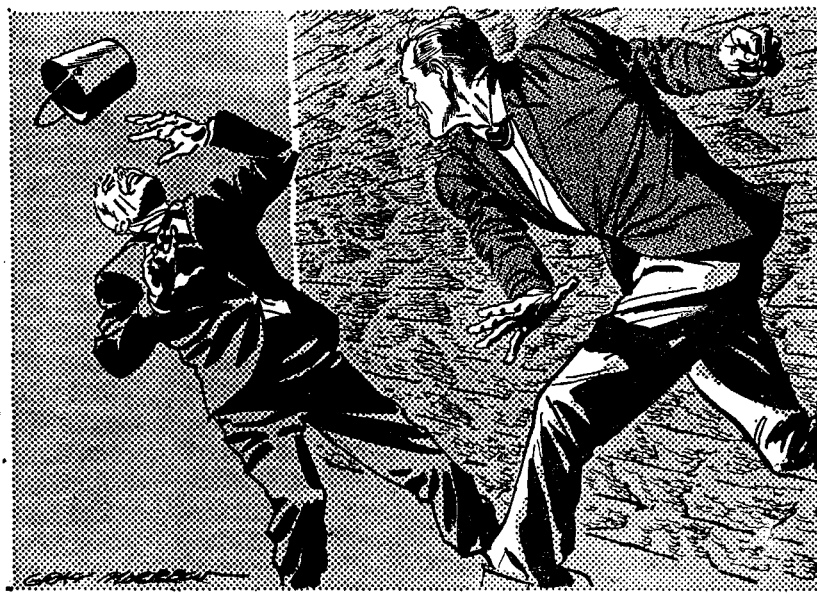

In the morning he visited the editorial offices of *Cosmopolis* and asked to speak to the personnel director. This was Mrs. Neutra, a brittle black-haired woman wearing a great deal of preposterous jewelry. She showed no inclination to speak to Gersen. "Sorry, sorry, sorry. I can't consider anything or anyone at this moment. I'm in a flap. Everybody's in a flap. There's been a shakeup; no one's job is any good."

"Perhaps I had better speak to the editor-in-chief," said Gersen. "There was to have been a letter from Zane Publishing, and it should have arrived."

The personnel director made a gesture of irritation. "Who or what is Zane Publishing?"

"The new owners," said Gersen politely.

"Oh." The woman pushed among the papers on her desk. "Maybe this is it." She read. "Oh. You're Henry Lucas."

"Yes."

"Hmm . . . Piff puff . . . You're to be a special writer. Something we just don't need at the moment. But I'm only Personnel Director. Oh hell, fill out the application, make an appointment for your psychiatric tests. If you survive, and you probably won't, show up a week from tomorrow for your orientation course."

Gersen shook his head. "I

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don't have time for any of these formalities. I doubt if the new owners have much sympathy with them."

"Sorry, Mr. Lucas. This is our inflexible program."

"What does the letter say?"

"It says to put Mr. Henry Lucas on the payroll as special writer."

"Then please do so."

"Oh, double bing-bang hell! If this is how things are going to go, why have a personnel director? Why have psychiatric tests and orientation courses? Why not just let janitors put out the rag?"

The woman seized a form, wrote with swift strokes of a flamboyant quill-pen. "Here you are. Take it in to the managing editor, he'll arrange your assignment."

The managing editor was a portly gentleman with lips pursed in a worried pout. "Yes, Mr. Lucas. Mrs. Neutra just called me. I understand you have been sent here for a position by the new ownership."

"I've been associated with them for a long time," said Gersen. "But all I want at this moment is whatever identification you supply your special correspondents, so that if it ever becomes necessary I can demonstrate that I'm an employee of *Cosmopolis*."

The managing editor spoke into an intercom. "On your way out, step into Department 2A, and your card will be prepared." He leaned morosely back into his chair. "It seems that you are to be a roving reporter, responsible to no one. A very nice billet, if I may say so. What do you propose to write about?"

"One thing or another," said Gersen. "Whatever comes up."

The managing editor's face sagged with bewilderment. "You can't go out and write a *Cosmopolis* article like that! Our issues are programmed months ahead! We use public opinion polls to find out what subjects people are interested in."

"How can they know what they're interested in if they haven't read it?" asked Gersen. "The new owners are throwing public opinion polls away."

The managing editor shook his head sadly. "How will we know what to write about?"

"I have an idea or two. For instance, the Institute could stand an airing. What are its current aims? Who are the men of Degrees 101, 102, 103? What information have they suppressed? What of Tyron Russ and his anti-gravity machine? The Institute deserves a comprehensive study. You could easily devote an entire issue to the Institute."

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The editor nodded curtly. "Don't you think it's a bit — well, intense? Are people really interested in these matters?"

"If not they should be."

"Easily said, but it's no way to run a magazine. People don't want to really understand anything. They want to think they have learned without the necessity of application. In our 'heavy' article we try to supply keys and guides, so at least they'll have something to talk about at parties. But go on. What else do you have in mind?"

"I've been thinking of Viole Falushe and the Palace of Love. Exactly what goes on at this establishment? What face does Viole Falushe show, what name does he bear when he comes in from Beyond? Who are his guests at the Palace of Love? How have they fared? Would they care to return?"

"An interesting topic," the editor admitted. "A bit close to the knuckle perhaps. We prefer to stay away from sensationalism and — shall we say? — the grim facts of reality. Still I've often wondered about the Palace of Love. What in the world *does* go on? The usual, I suppose. But no one knows for sure. What else?"

"That's all for now." Gersen rose to his feet. "In fact, I'll be working on this story myself."

The managing editor shrugged his shoulders. "You seem to have a free hand."

Gersen immediately rode the sub-channel tube to Rolingshaven, arriving at the vast Zone Station a few minutes before noon. He crossed the murmuring white-tiled lobby, past slideways and escalators labeled WIEN, PARIS, TSARGRAD, BERLIN, BUDAPEST, KIEV, NEAPOLIS, a dozen other ancient cities. He paused at a kiosk to buy a map, then went to a cafe and settled himself at a table with a stein of beer and plate of sausages.

Gersen had lived long in Amsterdam and had passed through the Zone Station on several occasions, but of the city Rolingshaven he knew little. As he ate he studied the map.

Rolingshaven was a city of considerable extent, divided into four principal municipalities by two rivers, the Gaas and the Sluicht, and the great Evres Canal. At the north was Zummer, a rather grim district of apartment towers and careful malls laid out by some neat-minded city council of the far past. On the Heybau, a promontory hooking out into the sea, was the famous Handelhal Conservatory, the wonderful Galactic Zoo and the Kindergarten. Zummer other-

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wise was lacking any interest.

South across the Sluicht was the Old City, a teeming confusion of small shops, inns, hostels, restaurants, beer caverns, bookstalls, huddled offices, askew little houses of stone and timber, dating from the Middle Ages. It was a district as chaotic and picturesque as Zummer was stark and dull; and here as well was the ancient University, overlooking the fish market along the banks of the Evres Canal.

Ambeules lay across the canal: a district of nine hills covered with homes and a periphery given to wharves, warehouses, shipyards, mud-flats from which were dredged the famous Flamande Oysters. The great Gaas estuary separated Ambeules from Dourrai, a district of somewhat lower hills again covered with small homes, with the great industries and fabrication plants straggling along the shore and southward.

This was the city where Viole Falushe, or more accurately, Vogel Filschner, had lived and where he had committed his first great crime. The exact locale was Ambeules, and Gersen decided to base himself in this area.

Finishing beer and sausages he rode an escalator to the third level above, where a local tube-car whisked him south under the Eves Canal to Ambeules Station. He rode to the surface and, looking right and left through the hazy radiance which characterized the region, approached the old woman who managed a newsstand. "Which is a good hotel nearby?"

The old woman pointed a brown finger. "Up Hoeblingasse to the Rembrandt Hotel. As good as any in Ambeules. Of course if its elegance you require, then you must go to the Hotel Prince Franz Ludwig, in Old Town, the finest in Europe with prices to match."

Gersen chose the Rembrandt Hotel, a pleasant old-fashioned structure with public rooms paneled in dark wood, and was taken to a suite of high-ceilinged rooms overlooking the great gray Gaas.

The day was still young. Gersen rode a cab to the Mairie, where he paid a small fee and was given access to the City Directory. He ran the record back to 1495. The screen spun to the letter F, Fi, and finally to the name Filschner. At this time three Filschners were listed. Gersen made notes of the addresses. He likewise found two Tinzys and made similar notes. Then he dialed to the current listings and found two Filschners and four Tinzys. One of the Filschners and one of the Tinzys had

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maintained the same address across the years.

Gersen next visited the office of the Ambeules *Helion,* and on the strength of his *Cosmopolis* card was given access to the morgue. He brought the index to the screen, scanned it for the name of Vogel Filschner, found a code number, coded and punched the *Show* button.

The tale was much as Dundine had told, though in condensed form. Vogel Filschner was described as "a boy given to spells of brooding and wandering alone by night." His mother, Hedwig Filschner identified as a beautician, professed herself amazed at Vogel's outrageous deed. She described him as a "good boy, though very idealistic and moody."

Vogel Filschner had had no close friends. In the biology laboratory he had been teamed with a lad named Roman Haenigsen, the school chess champion. They had played an occasional game of chess during the lunch hour. Roman evinced no astonishment at Vogel's crime: "He was a fellow who hated to lose. Whenever I beat him, he would go savage and throw aside the pieces. Still, it amused me to play with him. I don't like people who take the game frivolously."

Vogel Filschner was not a frivolous boy, thought Gersen.

A photograph appeared: the kidnapped girls, grouped in a picture identified as the "Philidor Bohus Choral Society". In the front row stood a plump smiling girl in whom Gersen recognized Dundine. Among the girls would be Jheral Tinzy, and Gersen checked the face against the caption. Jheral Tinzy was the third girl in the fourth row. Not only did a girl in the third row obscure her face; she also had turned her head aside at the time the photograph was taken, and what could be seen of her face was indistinct.

There was no photograph of Vogel Filschner.

The file ended.

So much for that, thought Gersen. Vogel Filschner's identity with Viole Falushe was not widely apprehended in Ambeules, if not at all. As verification, Gersen dialed for the file on Viole Falushe, the Demon Prince, but only a single reference excited his interest: "Viole Falushe at various times has implied that his original home was Earth. On several occasions a rumor has reached us to the effect that Viole Falushe has been seen here in Ambeules. Why he should wish to haunt our unexciting district is a question which cannot be answered, and the rumors appear to be no more than an insane hoax."

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Gersen departed from the newspaper offices and went to stand in the street.

The gendarmerie? Gersen decided against approaching them. Unlikely that they could tell him more than he already knew. Unlikely that they would if they could. Additionally, Gersen had no desire to arouse official curiosity.

Gersen checked the addresses he had noted, as well as the location of the Philidor Bohus Lyceum, against his map. The Lyceum was the nearest, at the far side of Lothar Parish. Gersen signaled a three-wheeled auto-cab and was conveyed up one of the nine hills through a district of small detached houses. Some were constructed in the ancient fashion, of glazed dark red brick and a high pitched roof of milk glass tiles, others in the new "hollow trunk" style: narrow concrete cylinders two thirds below the ground. There were houses of artificial sandstone compressed as a unit from molded soil; houses of pink or white panels surmounted by crimped metal domes; houses of laminated paper, with transparent roofs electrically charged to repel dust. The bulbs of uni-cast glass or glass-metal so common among the worlds of the Concourse had never won acceptance among the folk of western Europe, who compared them to pumpkins and paper lanterns and called the people who lived in them "non-human futurians". The cab discharged Gersen before the Philidor Bohus Lyceum, a grim cube of synthetic black stone flanked by a pair of smaller cubes.

The director of the lyceum was Dr. Willem Ledinger, a bland large-bodied man with taffy-colored skin and a lank lock of yellow hair which wound around his scalp in a most peculiar manner. Gersen wondered at the man's audacity thus to present himself before several thousand adolescents. Ledinger was affable and unsuspicious, readily accepting Gersen's statement that *Cosmopolis* wished to present a survey of contemporary young people.

"I don't think there's much to write about," said Ledinger. "Our young people are, if I must say it, unexceptionable. We have many bright students and at least our fair quota of dullards."

Gersen steered the conversation to students of the past and their careers; from here it was an easy connection to the subject of Vogel Filschner.

"Ah, yes," mused Dr. Ledinger, patting his yellow top-knot. "Vogel Filschner. I haven't heard his name for years. Before my time, of course; I was a mere instructor across the city at Hulba Technical Academy. But the

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scandal reached us, never fear! Faculties have big ears. What a tragedy! To think of a lad like that going so far wrong!"

"He never returned to Ambeules, then?"

"He'd be a fool to do so. Or to advertise his presence, at any rate."

"Do you have the likeness of Vogel Filschner among your records? Perhaps I might do a separate piece upon this peculiar crime."

Grudgingly Dr. Iedinger admitted that photographs of Vogel Filschner were on file. "But why rake up old nastiness? It is like breathing into graves."

"On the other hand, such an article might identify the rogue and bring him to justice."

"Justice?" Dr. Ledinger curled his lip in disbelief. "After thirty years? He was a hysterical child. No matter what his crime, by this time he has made redemption and found peace. What could be gained by bringing him to what you call 'justice'?"

Gersen was somewhat startled by Dr. Ledinger's vehemence. "To dissuade others. Perhaps there is a potential Vogel Filschner among your students this very instant."

Dr. Ledinger smiled wistfully. "I don't doubt it an instant. Certain of these young rascals — well, I won't tell tales out of school. And I won't supply you with the photographs. I find the idea completely objectionable."

"Is there a yearbook for the year of the crime? Or better, the previous year?"

Dr. Ledinger looked at Gersen a moment, his affability slowly disappearing. Then he went to his wall, plucked a volume from the shelves. He watched quietly as Gersen turned the pages and finally came upon the photograph of the Girls' Choral Society he had already seen. Gersen pointed. "There is Jheral Tinzy, the girl who rebuffed Vogel and drove him to his crime."

Dr. Ledinger examined the picture. "Think of it. Twenty-eight girls — snatched away Beyond. Their lives blasted. I wonder how they fared."

"Whatever became of Jheral Tinzy? She was not among the group, if you recall."

Dr. Ledinger examined Gersen with suspicion. "You seem to know a great deal about the case. Have you been completely candid with me?"

Gersen grinned. "Not altogether. I am principally interested in Vogel Filschner, but I don't want anyone to know I'm interested. If I can get the information I need discreetly, with no one the wiser, so much the better."

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"You are a police officer? Or of the IPCC?"

Gersen displayed his identification. "Here is my sole claim to fame."

"Hmmf. *Cosmopolis* plans to publish an article on Vogel Filschner? It seems a waste of paper and ink. No wonder *Cosmopolis* has lost prestige."

"What of Jheral Tinzy? You have her photograph in your files?"

"Undoubtedly." Dr. Ledinger laid his hands upon the desk, to signal that the interview had reached its end. "But we cannot open our confidential files haphazardly. I am sorry."

Gersen rose to his feet. "Thank you, in any case."

"I have done nothing to help you," said Dr. Ledinger stonily.

VI

Vogel Filschner had lived with his mother in a narrow little house at the eastern end of Ambeules, bordering on a dingy district of warehouses and transportation depots. Gersen climbed the embroidered iron steps, touched the button, faced the inspection eye. A woman's voice spoke. "Yes?"

Gersen spoke in his most confident voice: "I am trying to locate Madame Hedwig Filschner, who lived here many years ago."

"I know no one of that name. You must consult with Ewane Clodig, who owns the property. We only pay rent.

Ewane Clodig, whom Gersen found in the offices of Clodig Properties, consulted his records. "Madame Hedwig Filschner? The name is familiar, but I don't see it on my list . . . Here it is. She moved, let me see, thirty years ago."

"You have her present address?"

"No, sir. That is too much to ask. I have not even a forwarding address from thirty years ago . . . But it comes back! Is she not the mother of Vogel Filschner, the boy slaver?"

"Correct."

"Well then, I can tell you this. When the deed was known, she packed her belongings and disappeared, and no one has heard of her since."

Jheral Tinzy's old home was a tall octagonal structure of the so-called Fourth Palladian style, situated halfway up Bailleul Hill. The address corresponded to one which Gersen had noted in the current directory; the family had not changed its residence.

A handsome woman of early middle age answered the door. She wore a gay peasant smock, a flowered scarf around her head. Gersen appraised the woman be-

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fore he spoke. She returned a gaze so direct as to be bold. "You're Jheral Tinzy?" Gersen asked tentatively.

"Jheral?" The woman's eyebrows arched high. "No. No, indeed." She gave a sardonic bark of laughter. "What a strange thing to ask. Who are you?"

Gersen produced his identification. The woman read, returned the card. "What makes you think I am Jheral Tinzy?"

"She lived here at one time. She would be about your age."

"I'm her cousin." The woman considered Gersen more carefully than ever. "What did you want with Jheral?"

"May I come in? I'll explain."

The woman hesitated. As Gersen came forward she made a quick motion to restrain him. Then, after a dubious glance over her shoulder, she moved aside.

Gersen entered a hall with a floor of immaculate white glass tiles. On one hand was the display wall characteristic of middle-class European homes. Here hung a panel intricately inlaid with wood, bone and shell — Lenka workmanship from Nowhere, one of the Concourse planets, a set of perfume points from Pamfile; a rectangle of polished and perforated obsidian: — one of the so-called 'supplication slabs' from Lupus 2311; a small tapestry of exquisite design and workmanship. Gersen paused to examine it. "This is a beautiful piece. Do you know where it came from?"

"It's very rich," agreed the woman. "I believe it came from off-world."

"It looks to me like a Sabra piece," said Gersen.

From the upper floor came a harsh call: "Emma? who is there?"

"Awake already," muttered the woman. She raised her voice. "A gentleman from *Cosmopolis*, Aunt."

"We wish no magazines!" cried the voice. "I am explicit!"

"Very well, Aunt. I'll tell him so." Emma signaled Gersen into a sitting room, jerked her head toward the source of the voice. "Jheral's mother. She is not well."

"A pity," said Gersen. "Where, incidentally, is Jheral?"

Emma turned her bold glance on Gersen. "Why do you want to know?"

"To be candid, I'm trying to locate one Vogel Filschner."

Emma laughed soundlessly and without mirth. "You've come to the wrong place to find Vogel Filschner. What a joke!"

"You knew him?"

"Oh yes. He was in the class under mine at the Lyceum."

"You haven't seen him since the kidnapping?"

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"Oh, no. Never. Still, it's strange that you should ask. Emma hesitated, smiling tremulously as if in embarrassment. "It's like a cloud passing over the sun. Sometimes I look around, sure that I've glimpsed Vogel Filschner — but he's never there."

"What happened to Jheral?"

Emma seated herself, looked far back down the years. "You must remember that there was much publicity and outcry. It was the greatest outrage in memory. Jheral became pointed at; there were unpleasant scenes. Several of the mothers actually slapped and abused Jheral; she had snubbed Vogel, driven him to crime, hence shared his guilt. I must admit," said Emma reflectively, "that Jheral was a heartless flirt. She was simply adorable, of course. She could bring the boys with one little side-look — like this." Emma demonstrated. "Such a rascal. She even flirted with Vogel — pure sadism, because she couldn't bear the sight of him. Ah, the detestable Vogel! Every day Jheral would come home from school to tell us another of Vogel's enormities. How he dissected a frog and then, after wiping his hands on a paper towel, ate his lunch! How badly he smelled, as if he never changed his clothes! How he would boast of his poetic mind and try to impress her with his magnificence! It's true. Jheral with her tricks incited Vogel — and twenty-eight other girls paid the price."

"And then?"

"Great indignation. Everyone turned against Jheral, as perhaps they had always longed to do. Jheral finally ran away with an older man. She never returned to Ambeules. Not even her mother has the slightest idea of where she is."

Into the room rushed a blazing-eyed old woman with a mane of flying white hair. Gersen jumped behind a chair to avoid her charge. "What do you do, asking questions in this house? Be off with you! Hasn't there been trouble enough? I don't trust your face, you are like all the rest! Out, never return! Scoundrel! The audacity, entering this house with your filthy questions . . ."

Gersen left the house as expeditiously as he was able. Emma started to accompany him to the door; but her aunt, hobbling forward, shoved her aside to prevent her from going.

The door closed; the near-hysterical ranting became muffled. Gersen heaved a deep breath. A virago! He had been lucky to escape without any scratches.

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At a nearby cafe Gersen drank a flask of wine and watched the sun sink toward the sea.

An excellent possibility, of course, that the entire line of investigation, beginning with the notice in the Avente newspaper, was a wild-goose chase. To date, the only link between Viole Falushe and Vogel Filschner was the opinion of Kakarsis Asm. Emma Tinzy apparently believed that she had seen Vogel Filschner in Ambeules; Viole Falushe might well enjoy the dangerous pleasure of returning to the scenes of his childhood. If so, why had he not revealed himself to his old acquaintances? Although it seemed that Vogel Filschner had made precious few friends or acquaintances in any event. Jheral Tinzy perhaps had made the wisest of decisions when she took herself away from Ambeules. Viole Falushe had a notoriously long memory.

His one friend had been Roman Haenigsen, the chess champion. Somewhere also had been mention of a poet who had incited Vogel Filschner to excess . . .

Gersen called for a directory, and searched for the name Haenigsen. There it was; the book almost fell open to the name. Gersen copied the address and asked directions from a waiter. It appeared that Roman Haenigsen lived hardly five minutes' walk away. Finishing his wine, Gersen set off through the waning sunlight.

The house of Roman Haenigsen was the most elegant of the houses he had visited this day: a three-story structure of metal and melt-stone panels, with electric windows to go transparent or opaque at a spoken word.

Haenigsen was only just arriving home when Gersen turned into the walkway: a small brisk man with a large head and prim meticulous features. He peered sharply at Gersen and asked his business. Candor in this case seemed more useful than indirection. Gersen said:

"I am making inquiries in regard to your old classmate Vogel Filschner. I understand that you were almost his only friend."

"Hm," said Roman Haenigsen. He thought a moment. "Come inside, if you will, and we will talk."

He took Gersen into a study decorated with all manner of chess memorabilia: portraits, busts, collections of chessmen, photographs. "Do you play chess?" he asked Gersen.

"I have played on occasion, though not often."

"Like anything else, one must practice to keep in fighting trim. Chess is an old game." He went to a board, disarranged the chess-

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men with affectionate contempt. "Every variation has been analyzed; there is a recorded game to illuminate the results of any reasonable move. If one had a sufficiently good memory he would not need to think to win his games; he could merely play someone else's winning game. Luckily, no one owns such a memory but the robots. Still, you did not come here to talk of chess. Will you take a glass of liquor?"

"Thank you." Gersen accepted a crystal goblet containing an inch of spirits.

"Vogel Filschner! Strange to hear that name once more! Is his whereabouts known?"

"This is what I am attempting to learn."

Roman Haenigsen gave his head a wry shake. "You will learn nothing from me. I have neither seen him nor heard from him since 1494."

"I had hardly expected that he would return in his old identity. But it's possible —" Gersen paused as Roman Haenigsen snapped his fingers.

"Peculiar!" said Haenigsen. "Each Thursday night I play at the Chess Club. Perhaps a year ago I noticed a man standing under the clock. I thought, surely that's not Vogel Filschner? He turned, I saw his face. It was a man somewhat like Vogel, but far different. A man of fine appearance and poise, a man who had nothing of Vogel's hang-dog surliness. And yet, since you mention it, there was something to this man, perhaps his manner of holding his arms and hands, which reminded me of Vogel."

"You haven't seen this man since?"

"Not once."

"Did you speak to him?"

"No. In my surprise I must have halted to stare, but then I hurried on past."

"Can you think of anyone Vogel might wish to see? Did he have friends other than yourself?"

Roman Haenigsen pursed his lips wryly. "I was hardly his friend. We shared a laboratory table; I played him an occasional game of chess, which he often won. Had he applied himself he might have taken the championship. But he cared only for mooning over girls and writing bad poetry in imitation of a certain Navarth."

"Ah. Navarth. This is the poet whom Vogel Filschner sought to emulate."

"Unfortunately. In my opinion Navarth was a charlatan, a bombast, a man of the most dubious attitudes."

"And what became of him?"

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"I believe he still is about, though hardly the man he was thirty years ago. People have grown wise. Studied decadence no longer shocks as it did when I was a lad. Vogel naturally was entranced and went through the most ludicrous antics in order to identify with his idol. Yes, indeed. If anyone is to blame for the crimes of Vogel Filschner it is the mad poet Navarth!"

VII

On the following day Gersen paid a second visit to the offices of the *Helion*. The dossier on Navarth was enthusiastic and ample, reporting scandals, improprieties, defiances and outrageous pronouncements across a period of forty years.

The initial entry dealt with an opera presented by students of the university, with libretto by Navarth The first performance was declared an infamy, and nine students were expelled from the university. Thereafter Navarth's career soared and collapsed, resurged, recollapsed, at last with finality. For the past ten years he had resided aboard a houseboat on the Gaas estuary, near the Fitlingasse.

Gersen tubed to Station Hedrick on Boulevard Castel Vivence, surfaced into the commercial and shipping district of Ambeules, beside the Gaas estuary. The district roiled with the activity of agencies, warehouses, offices, wharves, buffets, restaurants, wine shops, fruit-hawkers, news kiosks, dispensaries. Barges nosed into docks to be unloaded by robots; drays rumbled along the boulevard; from below came the vibration of freight moving by tube. At a sweet-shop Gersen inquired for the Fitlingasse and was directed east along the boulevard.

Automatic open-sided passenger-wagons served the boulevard, with patrons riding on benches facing the street. Gersen rode a mile, two miles, with the Gaas on the right hand. The bustle diminished; the imposing blocks and masses of the commercial district gave way to three- and four-story structures of vast age, queer narrow-windowed buildings of melt-stone or terra-cotta panels, stained a hundred subtle colors by smoke and salt air. Occasionally the wagon passed vacant areas, where only weeds grew. Through these gaps could be seen the next street to the north, on a somewhat higher level than Boulevard Castel Vivence, with tall apartment buildings pressed tightly against each other.

The Fitlingasse was a narrow gray alley striking off up the hill. Gersen alighted and almost

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at once observed a hulking two-storied houseboat moored to a dilapidated dock.

A wisp of smoke drifted up from the chimney. Someone was aboard.

Gersen took stock of the surroundings. Hazy sunlight played on the estuary; on the far shore thousands of houses with brown tile roofs stood in ranks down to the water's edge. Elsewhere were unused wharves, rotting piles, a warehouse or two, a saloon with purple and green windows extending over the water.

On the dock a girl of seventeen or eighteen sat tossing pebbles into the water. She gave Gersen a brief dispassionate stare, looked away.

Gersen turned back to consider the houseboat. If this were Navarth's residence he enjoyed a very pleasant prospect — though the wan sunlight, the brown roofs of Dourrai, the rotting wharves, the lapping water invested the scene with melancholy. Even the girl seemed somber beyond her years. She wore a short black skirt, a brown jacket. Her hair was dark and rumpled, whether from wind or neglect could not be known. Gersen approached and inquired, "Is Navarth aboard the houseboat?"

She nodded without change of expression and watched with the detachment of a naturalist as Gersen descended the ladder to the landing, then crossed an alarming gangplank to the foredeck of the houseboat.

Gersen knocked at the door. There was no response. Gersen knocked again.

The door was flung violently open. A sleepy, unshaven man peered forth. His age was indeterminate; he was thin, spindle-shanked, with a twisted beak of a nose, rumpled hair of no particular color, eyes which though perfectly set gave the impression of looking in two directions at once. His manner wild and truculent. "Is there no privacy left in the world? Off the boat, at once! Whenever I settle for a moment's rest, some sheep-faced functionary, some importunate peddler of tracts insists on pounding me out of my couch. Will you not depart? Have I not made myself clear? I warn you, I have a trick or two up my sleeve!"

Gersen tried to speak to no avail. When Navarth reached within he hastily retreated to the dock. "A moment of your time!" he called. "I am no functionary, no salesman. I am named Henry Lucas, and I wish —"

Navarth shook his skinny fist. "Not now, not tomorrow, not in

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the total scope of the future, nor at any time thereafter do I wish to make your acquaintance. Be off with you! You have the face of a man that brings ill news; a gnashing blacktooth grin. These matters are clear to me; you are fey! I want nothing of you. Go away." With a leer of evil triumph he swung the gangplank away from the landing, re-entered the houseboat.

Gersen returned to the dock. The girl sat as before. Gersen looked back down at the houseboat. He asked in a wondering voice: "Is he always like that?"

"He is Navarth," said the girl, as if this were all that need be said.

Gersen went to the saloon and drank a pint of beer. The bartender was a quiet watchful man of great height with an imposing stomach, and either knew nothing about Navarth or did not choose to reveal what he knew. Gersen gleaned no information.

He sat thinking. A half hour passed. Then going to the telephone directory, he looked in the classified section under 'Salvage'. An advertisement caught his eye:

Joban Salvage and Tow
Tugs — Crane Barge —
Diving Equipment
No job too large or too small

Gersen telephoned and made his needs known. He was assured that on the morrow the equipment he required would be at his service.

The following morning a heavy ocean-going tug drove up the estuary, turned, eased into the mooring next to Navarth's houseboat, with a bare three feet between. The mate bawled orders to the seamen; lines were flung up to the dock and dropped over bollards. The tug was securely moored.

Navarth came out on the deck, dancing with fury. "Must you loom so close? Take that great hulk away! Do you intend to thrust me into the dock?"

Leaning on the railing of the tug. Gersen looked into Novarth's upturned face. "I believe I spoke a few words to you yesterday?"

"I recall very well. I requested your departure, and here you are again, more inconveniently than before."

"I wonder if you would give me the pleasure of a few minutes conversation? Perhaps there might be profit in it for you."

"Profit? Bah! I have poured more money out of my shoe than you have spent. I require only that you take your tug elsewhere."

"Certainly. We are here but for a few minutes."

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Navarth gave a pettish nod. At the far side of the tug the diver Gersen had hired was climbing back aboard. Gersen turned to Navarth. "It's very important that I speak to you. If you would be so good as to —"

"This 'importance' exists from a single point of view. Be off with you and your mammoth tug!"

"At once," said Gersen. He nodded to the diver, who touched a button.

Under the houseboat sounded an explosion; the houseboat shuddered, began to list.

Navarth ran back and forth in a frenzy. From the tug grapples were lowered and hooked to the houseboat's rub-rail. "Apparently there has been an explosion in your engine room," Gersen told Navarth.

"How can this be? There has never been an explosion before! There is not even an engine. I am about to sink!"

"Not so long as you are supported by the lines. But we are leaving in one minute, and I must cut loose the grapples."

"What?" Navarth threw up his arms. "I will go to the bottom, together with the boat! Is this your desire?"

"If you recall, you yourself ordered me to leave," said Gersen in a reasonable voice. "Hence —" he turned to the crewmen — "throw off the grapples! We depart!"

"No, no!" bellowed Navarth. "I'll sink!"

"If you invite me aboard your boat, if you talk to me and help me compose an article I'm writing, then that's a different matter," said Gersen. "I might be disposed to help you through this misfortune — even, perhaps, to the extent of repairing your hull."

"Why not?" stormed Navarth. "You are responsible for the explosion!"

"Careful, Navarth! That's at the very verge of slander! Remember there are witnesses!"

"Bah! What you have done is piracy and extortion. Writing an article, indeed! Well, then — why didn't you say so in the first place? I too am a writer! Come aboard; we will talk. I am always grateful for some small diversion; a man without friends is a tree without leaves."

Gersen jumped down upon the houseboat; Navarth, now all amiability, arranged chairs where they caught the full play of the pallid sunlight. He brought forth a bottle of white wine. "Sit then; make yourself at ease!" He opened the bottle, poured, then leaning back in his chair drank with pleasure. His face was placid and guileless, as if all the racial wisdom had passed through leav-

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ing no perceptible traces. Like Earth, Navarth was old, irresponsible and melancholy, full of a dangerous mirth.

"You are a writer then? I may say you do not correspond to the usual image."

Gersen produced his *Cosmopolis* identification. "Mr. *Henry Lucas,*" read Navarth. "*Special writer.* Why do you come to me? I am no longer heeded, my vogue is a memory. Discredited, penurious. Where was my offense? I sought to express truth in all its vehemence. This is a danger! A meaning must be uttered idly, without emphasis. The listener is under no compulsion to react, his customary defenses are not in place, the Meaning enters his mind. I have much to say about the world, but every year the compulsion dwindles. Let them live and die; it is all one to me. What will you write about?"

"Viole Falushe."

Navarth blinked. "An interesting topic, but why come to me?"

"Because you knew him as Vogel Filschner."

"Hm. Well, yes. This is a fact not generally known." With fingers suddenly limp. Navarth poured more wine. "What specifically do you wish?"

"Knowledge."

"I sugggest," said Navarth, suddenly brisk, "that you seek the information at its source."

Gersen nodded agreement. "Well enough, if I knew where to look. But what if he is off Beyond, at his Palace of Love?"

"This is not the case. He is here on Earth." As soon as Navarth spoke he seemed to regret his ingenuousness and frowned in irritation.

Gersen leaned back, his doubts and misgivings dissolved. Vogel Filschner and Viole Falushe were one; here was a man who knew him in both identities.

Navarth had become uneasy and resentful. "A thousand topics more interesting than Viole Falushe."

"How do you know he's on Earth?"

Navarth made a sound of grand scorn. "How do I know anything? I am Navarth!" He pointed to a wisp of smoke on the sky. "I see that, I know." He pointed to a dead fish, floating belly upward. "I see that, I know." He raised the bottle of wine, held it up against the sunlight. "I see that, I know."

Gersen reflected a moment in silence. "I am in no position to criticize your epistemology," he said at last. "In the first place, I don't understand it. Have you no more explicit knowledge of Viole Falushe?"

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Navarth attempted to lay his finger slyly alongside his nose, but miscalculating, prodded his eye. "There is a time for bravado and another for caution. I still do not know the point of your article."

"It is to be a judicious document, without exaggeration or apology. I intend that the facts shall speak for themselves."

Navarth pursed his lips. "A dangerous undertaking. Viole Falushe is the most sensitive of men. Do you recall the princess who detected a pea under forty mattresses? Viole Falushe can smell out a slur in a blind infant's morning invocation to Kalzibah. On the other hand, the world revolves; the carpet of knowledge unrolls. Viole Falushe has given me no cause for gratitude."

"Your appraisal of his character then is negative?" asked Gersen cautiously.

Navarth could control himself no longer. He drank wine with a grandoise gesture. "Negative indeed. Were I to give all orders, what a retribution I would create!" He slumped back in his chair, pointed a skinny finger toward the horizon, spoke in a hushed monotone: "A pyre tall as a mountain, and Viole Falushe at the top! Platforms surrounding for ten thousand musicians. With a single glance I strike the fire. The musicians play while their whiskey boils and their instruments melt. Viole Falushe sings soprano . . . ." He poured more wine. "A wistful vision. It can never be. I would be content seeing Viole Falushe drowned or dismembered by lions."

"You evidently are well acquainted."

Navarth nodded, his gaze fixed on the past. "Vogel Filschner read my poetry. An imaginative youth, but disoriented. How he changed, how he expanded! To his imagination he added control; he is now a great artist."

"Artist? What manner of artist?"

Navarth dismissed the question as irrelevant. "Never could he have arrived at his present stature without art, without style and proportion! Do not be deceived! Like myself he is a simple man, with the clearest of goals. Now you — you are the most complicated and opaque of men. I see a corner of your mind, then a black film shifts. Are you an Earthman? . . . But tell me nothing." Navarth waved his hands as if to intercept any answer Gersen might feel called upon to make. "There is too much knowledge already in the world; we use facts as crutches, to the impoverishment of our senses. Facts are falsehoods, logic

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is deceit. I know a single system of communication: the declaiming of poetry."

"Viole Falushe is also a poet?"

"He has no great art with words," grumbled Navarth, unwilling to relinquish control of the conversation.

"When Viole Falushe visits Earth, where does he stay? Here with you?"

Navarth stared at Gersen unbelievingly. "This is a sorry thought."

"Where then does he stay?"

"Here, there, everywhere. He is as elusive as air."

"How do you seek him out?"

"That I never do. He occasionally visits me."

"And has he done so recently?"

"Yes, yes, yes. Have I not implied as much? Why are you so interested in Viole Falushe?"

"To answer this would be to inflict a fact upon you," said Gersen with a grin. "But it's no secret. I represent *Cosmopolis* magazine and I wish to write an article on his life and activities."

"Hmmf. A popinjay for vanity is Viole Falushe. But why not ask him directly?"

"I would like to do so. First I must make his acquaintance."

"Nothing is easier," declared Navarth, "provided you pay the fees."

"Why not? I am on a liberal expense account."

Navarth jumped to his feet, suddenly full of enthusiasm. "We will need a beautiful girl, young, unsullied. She must project a particular quality of scintillance, a susceptibility, a fervor, an urgency." He looked vaguely here and there, as if in search of something he had lost. Up on the dock he spied the girl whom Gersen had seen the day before. Navarth put fingers to his mouth, produced a shrill whistle, signaled the girl to approach. "She'll do very well."

"Is this an unsullied young scintillant?" asked Gersen. "She seems more of a guttersnipe."

"Ha ha!" cawed Navarth. "You will see! I am weak and cachectic, but I am Navarth; old as I am women bloom under my touch. You shall see."

The girl came aboard the houseboat and listened to Navarth's program without comment. "We go forth to dine. Expense means nothing, we shall exalt ourselves with the finest. Prepare yourself then with silks, with jewels, with your most precious unguents. This is a wealthy gentleman, the finest of fellows. What is your name once more?"

"Henry Lucas."

"Henry Lucas. He is impatient. Go then, prepare yourself."

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The girl shrugged. "I am prepared."

"You are the best judge of this," declared Navarth. "Inside then, while I consult my wardrobe." He glanced at the sky. "A yellow day, a yellow night. I will wear yellow."

He led the way into his saloon, which was furnished with a wooden table, two chairs of carved oak, shelves stuffed with books and oddments, a vase containing several stalks of pampas grass. Navarth reached into a cabinet for a second flagon of wine, which he opened and banged upon the table, along with glasses. "Drink." With this he disappeared into the next room.

Gersen and the girl were left alone. He examined her covertly. She wore the black skirt of yesterday, with a black short-sleeved blouse, sandals, no jewelry or skin-tone, which on Earth was not currently fashionable. The girl had good features, though her hair was a tangle. She was either extremely poised or vastly indifferent. On impulse Gersen took a comb from Navarth's wash-stand and, going to the girl, combed her hair. After a single startled glance she stood quiet and passive. Gersen wondered what went on in her mind. Was she as mad as Navarth?

"There," he said at last. "You look somewhat better!"

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Navarth returned, wearing a maroon jacket several sizes too large, a pair of yellow shoes. "You have not tasted the wine." He filled three glasses brimming. "A merry evening in prospect! Here, the three of us; three islands in the sea, on each island a castaway soul: we go forth together, and what shall we find?"

Gersen tasted the wine: a fine heady moscato; he drank. Navarth poured the wine down his throat as if he were emptying a bucket into the estuary. The girl drank, without a tremor, without display of emotion. A strange girl—thought Gersen. Somewhere behind the grave face was flamboyance. What stimulus could bring it forth? What would cause her to laugh?

"Are we ready then?" Navarth looked inquiringly from the girl to Gersen, then threw open the door and ushered them graciously forth. "In search of Viole Falushe!"

VII

The Hotel Prince Franz Ludwig was the most elegant rendezvous of Rolingshaven. The main foyer was enormous: it measured two hundred feet on a side, a hundred feet to the ceiling. Golden light exuded from twelve chandeliers; a deep golden-brown carpet enriched with subtle patterns covered the floor. The walls were covered with silk of pale blue and yellow; the ceiling depicted scenes from a medieval court. The furnishings were of an intricate antique style, solid yet graceful, with cushions of rose or yellow satin, the woodwork lacquered a muted gold. On marble tables stood eight-foot urns from which a profusion of flower overflowed; beside each table stood a smartly uniformed page boy. Here was a sumptuous intricacy which could be found nowhere but on old Earth. Never before had Gersen entered a place so grand.

Navarth selected a couch near an alcove where a quartet of musicians played a set of capriccios. Navarth summoned a page and ordered champagne.

"Is this where we seek Viole Falushe?" asked Gersen.

"I have seen him here on several occasions," said Narvarth. "We shall be on the alert."

Sitting in the murmurous golden room they drank champagne. The girl's black skirt and blouse, her bare brown legs and sandals, through paradox or improbable juxtaposition, seemed neither tawdry nor unsuitable. Gersen was puzzled. How had she managed the transformation?

Navarth spoke of this and that; the girl said little or nothing; Gersen was content to let

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events go at their own pace. Indeed, he found himself enjoying the outing. The girl had put down considerable wine, but showed no effects. She seemed interested in the people who moved through the great foyer, but in a spirit of detachment. At last Gersen asked, "What is your name? I don't know how to speak to you."

The girl did not respond immediately. Navarth said, "Call her what you like. This is my custom. Tonight she is Zan Zu from Eridu."

The girl smiled, a brief flicker of amusement. Gersen decided that she was not, after all, a lackwit.

"Zan Zu, eh? Is this your name?"

"It's as good as any other."

"The champagne is finished, an excellent vintage. We go to dine!" Navarth rose to his feet and gave his arm to the girl. Crossing the foyer, they descended four broad stairs into the dining room, which was no less magnificent than the foyer.

Navarth ordered dinner with enthusiasm and finesse. Never had Gersen enjoyed a finer meal — one which made him regret the limits imposed by the capacity of his stomach. Navarth ate with voracious enjoyment. Zan Zu of Eridu, as Gersen now thought of the girl, ate delicately, without interest.

Gersen watched her sidelong. Was she ill? Had she recently undergone some great sorrow, or shock? She seemed composed enough — too composed, considering the wine she had drunk: moscato, champagne, the various wines Navarth had ordered to accompany dinner. Well, it made no difference to him, Gersen reflected. His business was with Viole Falushe. Though here at the Hotel Prince Franz Ludwig, in the company of Navarth and Zan Zu, Viole Falushe seemed unreal.

With an effort Gersen brought himself back to the business at hand. How easy to be seduced by richness, elegance, exquisite food, the golden light of chandeliers! He asked, "If Viole Falushe is not to be found here, where do you propose to look?"

"I have no set scheme," Navarth explained. "We must move as the mood takes us. Do not forget that Viole Falushe long ago regarded me as an exemplar. Is it not reasonable to suppose that his program will merge with our own?"

"Reasonable indeed."

"We will test the theory."

They lingered over coffee, trifles of fragrant pastry, quartergills of krystallek. Then Gersen paid the dinner check, well over

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SVU 200, and they departed the Hotel Prince Franz Ludwig.

"Now where?" asked Gersen.

Navarth ruminated. "We are somewhat early. Still, at Mikmak's Cabaret there is always amusement of one kind or another, if only in watching the good burghers at their decorous ease."

From Mikmak's Cabaret, they moved to Paru's, on to Der Fliegende Hollander, thence to the Blue Pearl. Each new tavern and cabaret seemed somewhat less genteel than the previous.

From the Blue Pearl Navarth led the way to the Sunset Cafe on the Boulevard Castel Vivence in Ambeules, thereafter to a succession of waterfront dives, beer cellars and dance-halls. At Zadiel's All-World Rendezvous, Gersen interrupted one of Navarth's dissertations. "Is it here that we can expect Viole Falushe?"

"Where else but here?" demanded the mad poet, now somewhat drunk. "Where the heart of Earth beats the thickest blood! Thick, purple, smelling of must: like crocodile blood, the blood of dead lions. Never fear! You will see your man! . . . What was I discussing? My youth, my squandered youth! At one time I worked for Tellur Transit, investigating the contents of lost suitcases. Here, perhaps, I gained my deepest insight into the structure of the human soul."

Gersen sat back in his chair. In the present circumstances passive weariness was the optimum course. To his surprise he found himself slightly drunk, though he had attempted moderation. The colored lights, the musics, Navarth's wild talk were probably no less responsible than the alcohol.

Zan Zu was as remote as ever. Looking sidelong at her, as he had tended to do all evening, Gersen wondered: what goes on in this umbral creature's mind? What does she hope from life? Does she daydream, does she yearn for a handsome lover, does she ache to travel, to visit the outworlds?

From the ancient cathedral on Flamande Heights twelve reverberating strokes of the bass bell. "The hour is midnight," croaked Navarth. He rose swaying to his feet, looked from Gersen to the girl. "Now we proceed."

"Where now?" asked Gersen.

Navarth pointed across the street, to a long low pavilion with an eccentric roof and festoons of green lights. "I suggest the Celestial Harmony Cafe, the rendezvous of travelers, spacemen, offworld wanderers, wayward vagabonds such as ourselves."

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To the Celestial Harmony Cafe they walked, Navarth declaiming upon the poor quality of life in present day Rolingshaven. "We are stagnant, slowly decaying! Where is our vitality? Drained to the outworlds! We have bled our life away! On Earth remain the sickly, the depraved, the cryptic thinkers, the sunset wanderers on the mudflats, the paranoids and involutes, the great epicures, the timid dreamers, the medievalists!"

"You have traveled the Oikumene?" Gersen inquired.

"Never has my foot lost contact with the soil of Earth!"

"In which of the categories, then, are you included?"

Navarth waved his arms on high. "Have I not inveighed against categories? Here is the Celestial Harmony Cafe. We arrive at the peak of the evening!"

They entered, threaded their way to a table, and Navarth instantly ordered magnum of champagne. The cafe was crowded; voices, clatter, and shuffle competed with boisterous jigs played by an orchestra of fife, concertina, euphonium and banjo, while the clientele danced, cavorted, kicked and pranced after the modes familiar to them.

A long bar on a level somewhat higher than the main floor ran the width of the building. Men standing at the railing were silhouetted against the orange and green lights of the bar. At the tables of the main floor sat men and women of every age, race, social condition and degree of sobriety. Most wore European garments, but not a few displayed the costumes of other regions and other worlds. Hostesses formal and self-appointed roved here and there, soliciting drinks, dispensing ribald repartee, arranging assignations. The musicians presently took up other instruments: a baritone lute, viola, flute and tymponet, with which they accompanied a troupe of tumblers. Navarth drank champagne with indefatigable zest.

Zan Zu from Eridu looked this way and that, whether from interest, uneasiness or a sense of suffocation Gersen could not be sure. Her knuckles were white where she held the goblet. She turned her head suddenly, met his gaze; her lips quivered in the faintest possible ghost of a smile. Or an embarrassed grimace . . . She raised the goblet, sipped her champagne.

Navarth's gaiety was at its height. He sang to the music, tapped the table with his fingers, reached to embrace the hostesses, who sidestepped with an air of boredom.

As if struck by a new thought he turned to consider Zan Zu,

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then inspected Gersen, as if puzzled why Gersen were not more enterprising. Gersen could not resist another glance at Zan Zu, and whether through wine, the colored lights, the ambiance of the evening, the guttersnipe tossing pebbles from a dock was gone. Gersen stared at her. The transformation was astonishing. She was magic, a creature of entrancing intensity.

Navarth was watching, gaiety suddenly abandoned. Gersen turned, Navarth looked quickly away. What am I up to? Gersen wondered. What is Navarth up to?

Reluctantly Gersen rejected the concepts which had surged up into his mind. He settled back into his chair.

Zan Zu, the girl from Eridu, looked somberly down at her goblet. With relief? Sadness? Boredom? Gersen was at a loss to decide. The ways of the girl's mind seemed important indeed. What was he getting into, he asked himself with a pang of bitter anger. He glared at Navarth, who met his gaze blandly. Zan Zu sipped her champagne.

Navarth intoned: "The Vine of Life grows a single melon. The color of the heart is unknown until the rind is split."

Gersen looked out across the tables. Navarth filled his goblet; Gersen drank.

Navarth was right. For a gain so wild, so delicious, so magic, there must be an initial abandon, a burning of bridges. What of Viole Falushe? What of his basic momentum? And as if in response to the thought Navarth seized his arm. "He has just come in."

Gersen roused himself from his brooding. "Where?"

"There. At the bar."

Gersen scanned the line of men who stood along the railing. Their silhouettes were nearly identical. Some looked this way, some that; some held mugs or flasks; others leaned with elbows on the railing. "Which is Viole Falushe?"

"See the man who watches the girl? He can see no one else. He is fascinated."

Gersen searched along the line of men. None seemed to be paying any great attention. Navarth whispered in a husky voice: "She knows! She is even more aware than I!"

Gersen glanced at the girl, who seemed uneasy; her fingers fumbled with the stem of the goblet.

As he watched, she glanced across the room at one of the dark shapes. How she had divined the attention was beyond Gersen's comprehension.

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A waiter approached the girl, spoke into her ear: Gersen could not hear what was said. Zan Zu looked down at the champagne goblet, twisted the stem between her fingers.

She came to some decision and putting her hands on the table rose to her feet. Gersen felt a surge of passion. Ignoble to sit quietly, to allow this to happen! He had been affronted. He was being pillaged of something which, while it had never belonged to him, nevertheless was his own. With a spasm of terror he wondered if it were too late. He lurched forward. He put his arm around the girl's waist, drew her down upon his lap.

She turned him an astounded glance, like one suddenly waking from sleep. "Why did you do that?"

"I don't want you to go."

"Why not?"

Gersen could not bring himself to speak. Zan Zu sat passively, if somewhat primly. Gersen noticed that there were tears in her eyes, that her cheeks were wet. Gersen kissed her cheek; Navarth gave vent to a mad cacchinnation. "Never, never does it end!"

Gersen put Zan Zu back on her chair, but held his hand over hers. "What never will end?" he asked in an even voice.

"I too have loved. But what of that? The time for love is past. Now there will be trouble, of course. Do you not understand the sensitivity of Viole Falushe? He is as strange and delicate as a fern frond. He cannot bear deprivation; it sets his teeth on edge and makes him ill."

"This did not occur to me."

"You have acted altogether wrongly," scolded Navarth. "His thoughts were totally for the girl. You need only have followed her, and there would have been Viole Falushe."

"Yes," muttered Gersen. "True. True. I now understand that." He glowered at the wine goblet, then back at the line of silhouettes. Someone was watching; he could sense the attention. There was trouble on the way. He was not in optimum condition, he had not trained in weeks. Additionally he was half-drunk.

A man walking past seemed to slip. He reeled into the table, upset wine into Gersen's lap. He looked into Gersen's face with eyes the color of bone. "Did you trip me, you sneak? I've a mind to spank you like a child."

Gersen studied the man. He had a slab-sided face, close-cropped yellow hair, a short neck as wide as his head. His body was stocky and muscular, the body of a man who spent much

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of his life on one of the heavy planets. "I don't believe I tripped you," said Gersen. But sit down. Join us for a glass of wine. Ask your friend to join us, as well."

The white-eyed man paused to consider a moment. He came to a decision. "I demand an apology!"

"Certainly," said Gersen. "It was on the tip of my tongue. If in any way I am responsible for causing you inconvenience, I am sorry."

"This is not enough! I despise foul baboons like yourself who insult one, then think to smirk themselves free of the consequences."

"This is your privilege," said Gersen. "Despise whom you like. But why not bring your friend over to join us? We could find much to talk about. You are from which world?" He raised his glass to drink.

The white-eyed man struck down the glass. "I insist that you leave the premises. You have offended me sufficiently."

Gersen looked across the white-eyed man's shoulder. "Your friend comes, in spite of your asinine braying."

The white-eyed man turned to look; Gersen kicked at his knee, hacked at the bulwark of a neck. Seizing one of the man's arms, Gersen heaved and sent him spinning across the dance floor. The white-eyed man bounced erect without effort and came back in a running crouch. Gersen pushed a chair into his face; the white-eyed man swept it aside, while Gersen struck him in the stomach. This was ribbed with muscle and hard as oak. The white-eyed man hunched his shoullers, jumped for Gersen, but four bouncers had appeared. Two propelled Gersen to the rear entrance and ejected him; two more escorted the white-eyed man to the front entrance.

Gersen stood disconsolately in the street. The entire evening was a botchery. What had got into him?

The white-eyed man might well be circling the building to find him. Gersen stepped back into the shadows. After a moment he started cautiously around to the front. At the corner waited the white-eyed man. "Dog's meat. You kicked me, you struck me. It is my turn."

"Best that you go your way," said Gersen in a mild voice. "I am a dangerous man."

"What do you think of me?" The white-eyed man approached; Gersen backed away, in no mood for rough-housing. He carried weapons, but on Earth killing was not taken lightly.

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The white-eyed man sidled forward. Gersen's heel came in contact with a bucket. He picked it up, slung it into the white-eyed man's face and was quickly around the corner. The white-eyed man came after him. Gersen held out his hand to display his projac. "See this? I can kill you."

The white-eyed man stood back, teeth glinting in a show of absolute contempt.

Gersen went to the front of the Celestial Harmony Cafe, the white-eyed man following at a distance of thirty feet.

The table was vacant. Navarth and Zan Zu were gone. The lounging figure at the railing? Lost among the others.

The white-eyed man waited beside the building. Gersen reflected a moment. Then slowly, as if in a reverie, he moved off down the boulevard and turned into a dark side street.

He waited. A minute passed. Gersen slid twenty feet farther along to a more favorable position, all the time watching the gap where street met boulevard. But no one passed in front, no one came to investigate.

Gersen waited ten minutes, watching both ways, presently craning his neck to peer up, on the chance that his enemy was coming over the roofs.

At last he returned to the boulevard. The botchery was complete. The white-eyed man, the most immediate link with Viole Falushe, had not bothered to pursue Gersen's acquaintance.

Seething with frustration, Gersen rode out Boulevard Castel Vivence to the Fitlingasse. The tug had departed; the houseboat, once more sound of hull, rode dark and silent on the water. Gersen alighted from the cab, went out on the dock. Silence. Lights from Dourrai glinted on the estuary.

Gersen shook his head in mournful amusement. What more could be expected from an evening with a mad poet and a girl from Eridu?

He returned to the cab and was conveyed to the Rembrandt Hotel. His quest had begun badly . . . but he had all the time in the world.

TO BE CONCLUDED

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HOW THE HEROES DIE

by LARRY NIVEN

Illustrated by FINLAY

Every man on Mars was a hero — but some heroes were more brave and daring than others!

I

Only sheer ruthlessness could have taken him out of town alive. The mob behind Carter hadn't tried to guard the Marsbuggies, since Carter would have needed too much time to take a buggy through the vehicular airlock. They could have caught him there, and they knew it. Some were guarding the personnel lock, hoping he'd try for that. He might have; for if he could have closed the one door in their faces and opened the next, the safeties would have protected him while he went through the third and fourth to the outside. On the Marsbuggy he was trapped in the bubble.

There was room to drive around in. Less than half the prefab houses had been erected so far. The rest of the bubbletown's floor was flat, fused sand, empty but for scattered piles of foam-plastic walls and ceilings

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and floors. But they'd get him eventually. Already they were starting up another buggy.

They never expected him to run his vehicle through the bubble wall.

The Marsbuggy tilted, then righted itself. A blast of breathing air roared out around him, picked up a cloud of fine sand and hurled it explosively away into the thin, poisoned atmosphere. Carter grinned as he looked behind him. They would die now, all of them. He was the only one wearing a pressure suit. In an hour he could come back and repair the rip in the bubble. He'd have to dream up a fancy story to tell when the next ship came . . .

Carter frowned. What were they —

At least ten wind-harried men were wrestling with the wall of a prefab house. As Carter watched, they picked the wall up off the fused sand, balanced it almost upright and let go. The foam-plastic wall rose into the wind and slapped hard against the bubble, over the ten-foot rip.

Carter stopped his buggy to see what would happen.

Nobody was dead. The air was not shrieking away but leaking away. Slowly, methodically, a line of men climbed into their suits and filed through the personnel lock to repair the bubble.

A buggy entered the vehicular lock. The third and last was starting to life. Carter turned his buggy and was off.

Top speed for a Marsbuggy is about twenty-five miles per hour. The buggy rides on three wide balloon-tired wheels, each mounted at the end of a five foot arm. What those wheel's can't go over, the buggy can generally hop over on the compressed air jet mounted underneath. The motor and the compressor are both powered by a Litton battery holding a tenth as much energy as the original Hiroshima bomb.

Carter had been careful, as careful as he had had time for. He was carrying a full load of oxygen, twelve four-hour tanks in the air bin behind him, and an extra tank rested against his knees. His batteries were nearly full; he would be out of air long before his power ran low. When the other buggies gave up he could circle round and return to the bubble in the time his extra tank would give him.

His own buggy and the two behind him were the only such vehicles on Mars. At twenty-five miles per hour he fled, and at twenty-five miles per hour they followed. The closest was half a mile behind.

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Carter turned on his radio. He found the middle of a conversation. " — Can't afford it. One of you will have to come back. We could lose two of the buggies, but not all three."

That was Shute, the bubble-town's research director and sole military man. The next voice, deep and sarcastic, belonged to Rufus Doolittle, the biochemist. "What'll we do, flip a coin?"

"Let me go," the third voice said tightly. "I've got a stake in this."

Carter felt apprehension touch the nape of his neck.

"Okay, Alf. Good luck," said Rufus. "Good hunting," he added maliciously, as if knew Carter was listening.

"You concentrate on getting the bubble fixed. I'll see that Carter doesn't come back."

Behind Carter, the rearmost buggy swung in a wide loop toward town. The other came on. And it was driven by the linguist, Alf Harness.

Most of the bubble's dozen men were busy repairing the ten-foot rip with heaters and plastic sheeting. It would be a long job but an easy one, for by Shute's orders the bubble had been deflated. The transparent plastic had fallen in folds across the prefab houses, forming a series of interconnected tents. One could move about underneath with little difficulty.

Lieutenant-Major Michael Shute watched the men at work and decided they had things under control. He walked away like a soldier on parade, stooping as little as possible as he moved beneath the dropping folds.

He stopped and watched Gondot operating the airmaker. Gondot noticed him and spoke without looking up.

"Mayor, why'd you let Alf chase Carter alone?"

Shute accepted his nickname. "We couldn't lose both tractors."

"Why not just post them on guard duty for two days?"

"And what if Carter got through the guard? He must be determined to wreck the dome. He'd catch us with our pants down. Even if some of us got into suits, could we stand another rip in the bubble?"

Gondot reached to scratch his short beard. His fingertips rapped helmet plastic, and he looked annoyed. "Maybe not. I can fill the bubble anytime you're ready, but then the airmaker'll be empty. We'll be almost out of tanked air by the time they finish mending that rip. Another'll finish us."

Shute nodded and turned away. All the air anyone could

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use—tons of nitrogen and oxygen—were right outside; but they were in the form of nitric oxide gas. The airmaker could convert it three times as fast as men could use it. But if Carter tore the dome again, that would be too slow.

But Carter wouldn't. Alf would see to that. The emergency was over—this time.

And so Lieutenant-Major Shute could go back to worrying about the emergency's underlying causes.

His report on those causes had been finished a month ago. He had reread it several times since, and always it had seemed complete and to the point. Yet he had the feeling it could be written better. He ought to make it as effective as possible. What he had to say could only be said once, and then his career would be over and his voice silenced.

Cousins had sold some fiction once, writing as a hobby. Perhaps he would help. But Shute was reluctant to involve anyone else in what amounted to his own rebellion.

Yet—he'd have to rewrite that report now, or at least add to it. Lew Harness was dead, murdered. John Carter would be dead within two days. All Shute's responsibility. All pertinent.

The decision wasn't urgent. It would be a month before Earth was in reach of the bubbletown's sending station.

Most of the asteroids spend most of their time between Mars and Jupiter, but it often happens that one of them crosses a panet where theretofore it had crossed only an orbit. There are asteroid craters all over Mars—old eroded ones, sharp new ones, big ones, little ones, ragged and smooth ones. The bubbletown was at the center of a large, fairly recent crater four miles across: an enormous, poorly cast ash tray discarded on the reddish sand.

The buggies ran over cracked glass, avoiding the occasional tilted blocks, running uphill toward the broken rim. A sky the color of blood surrounded a tiny, brilliant sun set precisely at the zenith.

Inevitably Alf was getting closer. When they crossed the rim and started downhill they would pull apart. It was going to be a long chase.

Now was the time for regrets, if there ever was such a time. But Carter wasn't the type, and he had nothing to be ashamed of anyway. Lew Harness had to die; had as much as *asked* to die. Carter was only puzzled that his death should have been provoked so violent a reaction. Could they *all* be—the way Lew

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had been? Unlikely. If he'd stayed and explained—

They'd have torn him apart. Those vulpine faces, with the distended nostrils and the bared teeth!

And now he was being chased by one man. But that man was Lew's brother.

Here was the rim, and Alf was still well behind. Carter slowed as he went over, knowing that the way down would be rougher. He was just going over the edge when a rock ten yards away exploded in white fire.

Alf had a flare pistol.

Carter just stopped himself from scrambling out of the buggy to hide in the rocks. The buggy lurched downward, and—like it or not—Carter had to forget his terror to keep the vehicle upright.

The rubble around the crater's rim slowed him still further. Carter angled the buggy for the nearest rise of sloping sand. As he reached it, Alf came over the rim, a quarter mile behind. His silhouette hesitated there against the bloody sky, and another flare exploded, blindingly bright and terrifyingly close.

Then Carter was on the straightaway, rolling down sliping sand to a flat horizon.

The radio said, "Gonna be a long one, Jack."

Carter pushed to transmit. "Right. How many flares do you have left?"

"Don't worry about it."

"I won't. Not the way you're throwing them away."

Alf didn't answer. Carter left the radio band open, knowing that ultimately Alf must talk to the man he needed to kill.

The crater which was home dropped behind and was gone. Endless flat desert rose before the buggies, flowed under the oversized wheels and dropped behind. Gentle crescent dunes patterned the sand, but they were no barrier to a buggy. Once there was a Martian well. It stood all alone on the sand, a weathered cylindrical wall seven feet high and ten in circumference, made of cut diamond blocks. The wells and the slanting script written deep into their 'dedication blocks' were responsible for the town's presence on Mars. Since the only Martian ever found — a mummy centuries dead, at least—had exploded at the first contact with water, it was generally assumed that the wells were crematoriums. But it wasn't certain. Nothing was certain about Mars.

The radio maintained an eery silence. Hours rolled past; the sun slid toward the deep red horizon, and still Alf did not

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speak. It was as if Alf had said everything there was to say to Jack Carter. And that was wrong! Alf should have felt the need to justify himself!

It was Carter who sighed and gave up. "You can't catch me, Alf."

"No, but I can stay behind you as long as I need to."

"You can stay behind me just twenty-four hours. You've got forty-eight hours of air. I don't believe you'll kill yourself just to kill me."

"Don't count on it. But I won't need to. Noon tomorrow, you'll be *chasing me. You need to* breathe, just like I do."

"Watch this," said Carter. The O-tank resting against his knee was empty. He tipped it over the side and watched it roll away.

"I have an extra tank," he said. He smiled in relief at his release from that damning weight. "I can live four hours longer than you can. Want to turn back?"

"No."

"He's not worth it, Alf. Your brother was nothing but a queer."

"Does that mean he's got to die?"

"It does if the son of a bitch propositions me. Maybe you're a little that way yourself?"

"No. And Lew wasn't queer till he came here. They should have sent men and women."

"Amen."

"You know, lots of people get a little sick to their stomachs about homosexuals. I do myself, and it hurt to see it happening to Lew. But there's only one type who goes looking for 'em so he can beat up on 'em."

Carter frowned.

"Latents. Guys who think they might turn queer themselves if you gave 'em the opportunity. They can't stand queers around because queers are temptation."

"You're just returning the compliment."

"Maybe."

"Anyway, the town has enough problems without things like that going on. This whole project could have been wrecked by someone like your brother."

"How bad do we need killers?"

"Pretty badly, this time."

Suddenly Carter knew that he was now his own defense attorney. If he could convince Alf that he shouldn't be executed, he could convince the rest of them. If he couldn't—then he must destroy the bubble or die. He went on, talking as persuasively as he knew how.

"You see, Alf, the town has two purposes. One is to find out if we can live in an environment as hostile as this one. The other is to contact the Martians. Now

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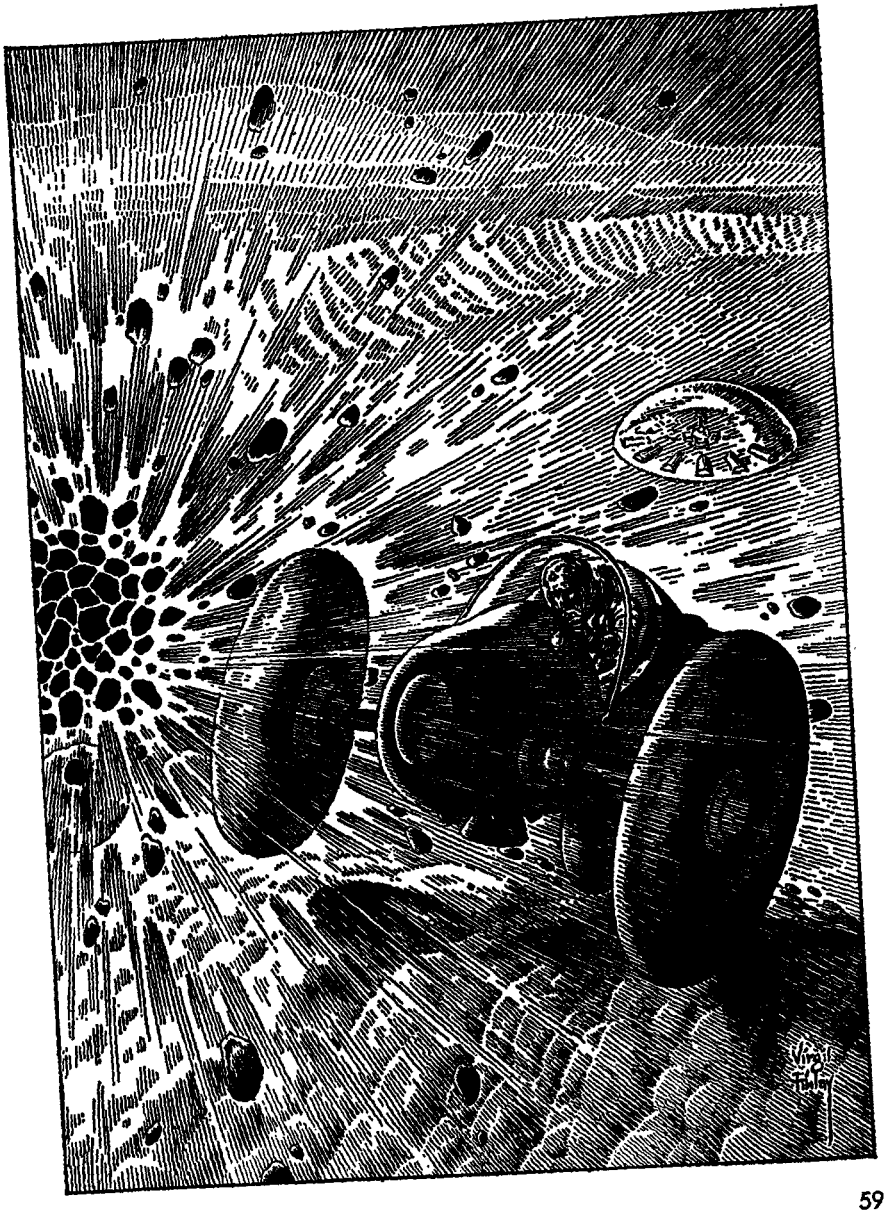

HOW THE HEROES DIE

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there are just fifteen of us in town — "

"Twelve. Thirteen when I get back."

"Fourteen if we both do. Okay? Each of us is more or less necessary to the functioning of the town. But I'm needed in both fields. I'm the ecologist, Alf. I not only have to keep the town from dying from some sort of imbalance, I also have to figure out how the Martians live, what they live on, how Martian life forms depend on each other. You see?"

"Sure. How 'bout Lew? Was he necessary?"

"We can get along without him. He was the radio man. At least a couple of us have enough training to take over communications."

"You make me so happy. Doesn't the same go for you?"

Carter thought hard and fast. Yes, Gondot in particular could keep the town's life-support system going with little help. But—"Not with the Martian ecology. There isn't—"

"There isn't any Martian ecology. Jack, has anyone ever found *any* life on Mars besides that man-shaped mummy? You can't be an ecologist without there being something to make deductions from. You've got nothing to investigate. So what good are you?"

Carter kept talking. He was still arguing as the sun dropped into the sea of sand and darkness closed down with a snap. But he knew now it was of no use. Alf's mind was closed.

II

By sunset the bubble was taut, and the tortured scream of incoming breathing-air had dropped to a tired sigh. Lieutenant-Major Shute unfastened the clamps at his shoulders and lifted his helmet, ready to jam it down fast if the air was too thin. It wasn't. He set the helmet down and signalled thumbs-up to the men watching him.

Ritual. Those dozen men had known the air would be safe. But rituals had grown fast where men worked in space, and the most rigid was that the man in charge fastened his helmet last and unfastened it first. Now suits were being removed. Men moved about their duties. Some moved toward the kitchen to clean up the vacuum-induced havoc so Hurley could get dinner.

Shute stopped Lee Cousins as he went by. "Lee, could I see you a minute?"

"Sure, Mayor." Shute was "the Mayor" to all bubbletown.

"I want your help as a writer," said Shute. "I'm going to send

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in quite a controversial report when we get within range of Earth, and I'd like you to help me make it convincing."

"Fine. Let's see it."

The ten streetlamps came on, dispelling the darkness which had fallen so suddenly. Shute led the way to his prefab bungalow, unlocked the safe and handed Cousins the manuscript. Cousins hefted it. "Big," he said. "Might pay to cut it."

"By all means if you find anything unnecessary."

"I'll bet I can," Cousins grinned. He dropped on the bed and began to read.

Ten minutes later he asked, "Just what *is* the incidence of homosexuality in the Navy?"

"I haven't the faintest idea."

"Then it's not powerful evidence. You might quote a limerick to show that the problem's proverbial. I know a few."

"Good."

A little later Cousins said, "A lot of schools in England are coeducational. More every year."

"I know. But the present problem is among men who graduated from boys' schools when they were much younger."

"Make that clearer. Incidentally was your school coeducational?"

"No."

"Any queers?"

"A few. At least one in every class. The seniors used to use paddles on the ones they suspected."

"Did it help?"

"No. Of course not."

"Okay. You've got two sets of circumstances under which a high rate of homosexuality occurs. In both cases you've got three conditions: a reasonable amount of leisure, no women, and a disciplinary pecking order. You need a third example."

"I couldn't think of one."

"The Nazi organization."

"Oh?"

"I'll give you details." Cousins went on reading. He finished the report and put it aside. "This'll cause merry hell," he said.

"I know."

"The worst thing about it is your threat to give the whole thing to the newspapers. If I were you I'd leave that part of it out."

"If you were me you wouldn't," said Shute. "Everyone who had anything to do with WARGOD knew they were risking everything that's happened. They preferred to let us take that risk rather than risk public opinion themselves. There are hundreds of Decency Leagues in the United States. Maybe thousands, I don't know. But they'd all come down on the government like

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harpies if anyone tried to send a mixed crew to Mars or anywhere else in space. The only way I can make the government act is to give them a greater threat."

"You win. This is a greater threat."

"Did you find anything else to cut out?"

"Oh, hell yes. I'll go through this again with a red pencil. You talk too much, you use too many words that are too long and you generalize. You'll have to give details, or it'll lose its impact."

"I'll be ruining some reputations."

"Can't be helped. We've got to have women on Mars—and right now. Rufe and Timmy are building up to a real spitting fight. Rufe thinks he caused Lew's death by leaving him, and Timmy keeps taunting him with it."

"All right," said Shute He stood up. He had been sitting erect throughout the discussion, as if sitting at attention. "Are the buggies still within radio range?"

"They can't hear us, but we can hear them. Timmy still is keeping busy working the buggy's radio."

"Good. I'll keep him on it until they go out of range.

"Shall we get dinner?"

III

Phobos rose where the sun had set, a scattering of moving dots of light, like a crescent of dim stars. It grew brighter as it rose: a new moon becoming a half moon in hours. Then it was too high to look at. Carter had to keep his eyes on the triangle of desert lit by his headlights. The headlight beams were the color of earthly sunlight, but to Carter's Mars-adapted eyes they turned everything blue.

He had chosen his course well. The desert ahead was flat for more than seven hundred miles. There would be no low hills rising suddenly before him to trap him into jet-jumping in faint moonlight or waiting for Alf to come down on him. Alf's turnover point would come at high noon tomorrow, and then Carter would have won.

For Alf would turn back toward the bubble, and Carter would go on into the desert. When Alf was safely over the horizon, Carter would turn left or right, go on for an hour, and then follow a course parallel to Alf's. He would be in sight of the bubble an hour later than Alf, with three hours in which to plan.

Then would come the hardest part. Certainly there would be someone on guard. Carter would

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have to charge past the guard—who might be armed with a flare pistol—tear the bubble open and somehow confiscate the supply of O-tanks. Ripping the bubble open would probably kill everyone inside, but there would be men in suits outside. He would have to load some of the O-tanks on his buggy and open the stopcocks of the rest, all before anyone reached him.

What bothered him was the idea of charging a flare pistol. But perhaps he could just aim the buggy and jump out. He would have to see.

His eyelids were getting heavy, and his hands were cramped. But he dared not slow down, and he dared not sleep.

Several times he had thought of smashing the come-hither in his suit radio. With that thing constantly beeping, Alf could find him anytime he pleased. But Alf could find him anyway. His headlights were always behind, never catching up, never dropping away. If he ever got out of Alf's sight, that come-hither would have to go. But there was no point in letting Alf know that. Not yet.

Stars dropped into the black western horizon. Phobos rose again, brighter this time, and again became too high to watch. Diemos now showed above the steady shine of Alf's headlights.

Suddenly it was day, and here and there were thin black shadows pointing to a yellow horizon. Stars still glowed in a red-black sky. There was a crater ahead, a glass dish set in the desert, not too big to circle around. Carter angled left. The buggy behind him also angled. if he kept turning like this, Alf couldn't help but gain on him. Carter sucked water and nutrient solution from the nipples in his helmet and concentrated on steering. His eyes felt gritty, and his mouth belonged to a Martian mummy.

"Morning," said Alf.

"Morning. Get plenty of sleep?"

"Not enough. I only slept about six hours, in snatches. I kept worrying you'd turn off and lose me."

For a moment Carter went hot and cold. Then he knew that Alf was needling him. He'd no more slept than Carter had.

"Look to your right," said Alf.

To their right was the crater wall. And—Carter looked again to be sure—there was a silhouette on the rim, a man-shaped shadow against the red sky. With one hand it balanced something tall and thin.

"A Martian," Carter said softly. Without thinking he turned his buggy to climb the wall. Two flares exploded in front of him,

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a second apart, and he frantically jammed the tiller bar hard left.

"God damn it, Alf! That was a *Martian!* We've got to go *after* it!"

The silhouette was gone. No doubt the Martian had run for its life when it saw the flares.

Alf said nothing. Nothing at all. And Carter rode on, past the crater, with a murderous fury building in him.

It was eleven o'clock. The tips of a range of hills were pushing above the western horizon.

"I'm just curious," Alf said, "but what would you have said to that Martian?"

Carter's voice was tight and bitter. "Does it matter?"

"Yah. The best you could have done was scare him. When we get in touch with the Martians, we'll do it just the way we planned."

Carter ground his teeth. Even without the accident of Lew Harness' death, there was no telling how long the translation plan would take. It involved three steps: sending pictures of the writings on the crematory wells and other artifacts to Earth, so that computers could translate the language; writing messages in that language to leave near the wells where Martians would find them; and then waiting for the Martians to make a move.

But there was no reason to believe that the script on the wells wasn't from more than one language or from the same language as it had changed over thousand of years. There was no reason to assume the Martians would be interested in strange beings living in a glorified balloon, regardless of whether the invaders knew how to write. And could the Martians read their own ancestors' script?

An idea . . . "You're a linguist," said Carter. No answer.

"Alf, we've talked about whether the town needed Lew, and we've talked about whether the town needs me. But how about you? Without you we'd *never* get the well-script translated."

"I doubt that. The CalTech computers are doing most of the work, and anyhow I left notes. But so what?"

"If you keep chasing me you'll force me to kill you. Can the town afford to lose you?"

"You can't do it. But I'll make you a deal if you want. It's eleven now. Give me two of your O-tanks, and we'll go back to town. We'll stop two hours from town, leave your buggy, and you'll ride the rest of the way tied up in the air bin. Then you can stand trial."

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"You think they'll let me off?"

"Not after the way you ripped the bubble open on your way out. That was a blunder, Jack."

"Why don't you just take one tank?" If Alf did that, Carter would get back with two hours to spare. He knew, now, that he would have to wreck the bubble. He had no alternative. But Alf would be right behind him with the flare gun . . .

"No deal. I wouldn't feel safe if I didn't know you'd run out of air two hours before we got back. You want me to feel safe, don't you?"

It was better the other way. Let Alf turn back in an hour. Let Alf be in the bubble when Carter returned to tear it open.

"Carter turned him down," said Timmy. He hunched over the radio, holding his earphones with both hands, listening with every nerve for voices which had almost faded away.

"He's planning something," Gondot said uneasily.

"Naturally," said Shute. "He wants to lose Alf, return to the bubble and wreck it. What other hope has he?"

"But he'd die too," said Timmy.

"Not necessarily. If he killed us all he could mend the new rip while he lived on the O-tanks we've got left. I think he could keep the bubble in good enough repair to keep one man alive."

"My *Lord!* What can we do?"

"Relax, Timmy. It's simple math." It was easy for Lieutenant-Major Shute to keep his voice light, and he didn't want Timmy to start a panic. "If Alf turns back at noon, Carter can't get here before noon tomorrow. At four he'll be out of air. We'll just keep everyone in suits for four hours." Privately he wondered if twelve men could repair even a small rip before they used up the bottled air. It would be one tank every twenty minutes . . . but perhaps they wouldn't be tested.

"Five minutes of twelve," said Carter. "Turn back, Alf. You'll only get home with ten minutes to spare."

The linguist chuckled. A quarter mile behind, the blue dot of his buggy didn't move.

"You can't fight mathematics, Alf. Turn back."

"Too late."

"In five minutes it will be."

"I started this trip short an O-tank. I should have turned two hours ago."

Carter had to wet his lips from the water nipple before he answered. "You're lying. Will you stop bugging me? Stop it!"

Alf laughed. "Watch me turn back."

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His buggy came on quickly.

It was noon, and the chase would not end. At twenty-five miles per, two Marsbuggies a quarter of a mile apart moved serenely through an orange desert. Chemical stains of green rose ahead and fell behind. Crescent dunes drifted by, as regular as waves on an ocean. The ghostly path of a meteorite touched the northern horizon in a momentary white flash. The hills were higher now, humps of smooth rock-like animals sleeping beyond the horizon. The sun burned small and bright in a sky reddened by nitric oxide and, near the horizon, blackened by its thinness to the color of bloody India ink.

Had the chase really started at noon? Exactly noon? But it was twelve thirty now, and he was *sure* that was too late.

Alf had doomed himself—to doom Carter.

But he *wouldn't*.

"Great minds think alike," he told the radio.

"Really?" Alf's tone said he couldn't have cared less.

"You took an extra tank."

"No I didn't, Jack."

"You must have. If there's one thing I'm sure of in life, it's that *you* are *not* the type to kill yourself. All right, Alf, I quit. Let's go back.' '

"Let's not."

"We'd have three hours to chase that Martian."

A flare exploded behind his buggy. Carter sighed raggedly. At two o'clock both buggies would turn back to bubbletown, where Carter would probably be executed.

But suppose I turn back now?

That's easy. Alf will shoot me with the flare gun.

He might miss. If I let him choose my course, I'll die for certain.

Carter sweated and cursed himself, but he couldn't do it. He couldn't deliberately turn into Alf's gun.

At two o'clock the base of the range came over the horizon. The hills were incredibly clear, almost as clear as they would have been on the Moon. But they were horribly weathered, and the sea of sand lapped around them as if eager to finish them off, to drag them down.

Carter rode with his eyes turned behind. His watch hands moved on, minute to minute, and Carter watched in disbelief as Alf's vehicle continued to follow. As the time approached and reached two thirty, Carter's disbelief faded. It didn't matter, now, how much oxygen Alf had. They had passed Carter's turnover point.

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"You've killed me," he said.

No answer.

"I killed Lew in a fistfight. What you've done to me is much worse. You're killing me by slow torture. You're a demon, Alf."

"Fistfight my aunt's purple asterisk. You hit Lew in the throat and watched him drown in his own blood. Don't tell *me* you didn't know what you were doing. Everybody in town knows you know karate."

"He died in minutes. I'll need a whole day!"

"You don't like that? Turn around and rush my gun. It's right here waiting."

We could get back to the crater in time to search for that Martian. That's why I came to Mars. To learn what's here. So did you, Alf. Come on, let's turn back."

"You first."

But he couldn't. He *couldn't*. Karate can defeat any hand-to-hand weapon but a quarterstaff, and Carter had quarterstaff training too. But he couldn't charge a flare gun! Not even if Alf meant to turn back. And Alf didn't.

IV

A faint whine vibrated through the bubble. The sandstorm was at the height of its fury, which made it about as dangerous as an enraged caterpillar. At worst it was an annoyance. The shrill, barely audible whine could get on one's nerves, and the darkness made street lamps necessary. Tomorrow the bubble would be covered a tenth of an inch deep in fine, Moon-dry silt. Inside the bubble it would be darker than night until someone blew the silt away with an O-tank.

To Shute the storm was depressing. Here on Mars was Lieutenant-Major Shute, Boy Hero, facing terrifying dangers on the frontiers of human exploration! A sandstorm that wouldn't have harmed an infant. Nobody here faced a single danger that he had not brought with him.

Would it be like this forever? Men traveling enormous distances to face themselves?

There had been little work done since noon today. Shute had given up on that. On a stack of walls sat Timmy, practically surrounding the buggy-pickup radio, surrounded in turn by the bubble's population.

Timmy stood up as Shute approached the group. "They're gone," he announced, sounding very tired. He turned off the radio. The men looked at each other, and some got to their feet.

"Tim! How'd you lose them?"

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Timmy noticed him. "They're too far away, Mayor."

"They never turned around?"

"They never did. They just kept going out into the desert. Alf must have gone insane. Carter's not worth dying for."

Shute thought—*But he was once.* Carter had been one of the best: tough, fearless, bright, enthusiastic. Shute had watched him deteriorate under the boredom and the close quarters aboard ship. He had seemed to recover when they reached Mars, when all of them suddenly had work to do. Then, yesterday morning—murder.

Alf. It was hard to lose Alf. Lew had been little loss, but Alf—

Cousins dropped into step beside him. "I've got that red-pencil work done."

"Thanks, Lee. I'll have to do it all over now."

"Don't do it over. Write an addendum. Show how and why three men died. Then you can say, 'I told you so.' "

"You think so?"

"My professional judgment. When's the funeral?"

"Day after tomorrow. That's Sunday. I thought it would be appropriate."

"You can say all three services at once. Good timing."

To all bubbletown, Jack Carter and Alf Harness were dead.

But they still breathed—

The mountains came toward them: the only fixed points in an ocean of sand. Alf was closer now, something less than four hundred yards behind. At five o'clock, Carter reached the base of the mountains.

They were too high to go over on the air jet. He could see spots where he might have landed the buggy while the pump filled the jet tank for another hop. But for what ?

Better to wait for Alf.

Suddenly Carter knew that that was the one thing in the world Alf wanted. To roll up alongside in his buggy. To watch Carter's face until he was sure Carter knew exactly what was to come. And then to blast Carter down in flames from ten feet away and watch while a bright magnesium-oxidizer flare burned through his suit and skin and vitals.

The hills were low and shallow. Even from yards away he might have been looking at the smooth flank of a sleeping beast —except that this beast was not breathing. Carter took a deep breath, noticing how stale the air had become despite the purifier unit, and turned on the compressed air jet.

The air of Mars is terribly thin, but it can be compressed;

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and a rocket will work anywhere, even a compressed-air rocket. Carter went up, leaning as far back in the cabin as he could to compensate for the loss of weight in the O-tanks behind him, to put as little work as possible on gyroscopes that were meant to spin only in emergencies. He rose fast, and he tilted the buggy to send it skating along the thirty-degree slope of the hill. There were flat places along the slope, but not many. He should reach the first one easily . . .

A flare exploded in his eyes. Carter clenched his teeth and fought the urge to look behind. He tilted the buggy backward to slow himself down. The jet pressure was dropping.

He came down like a feather two hundred feet above the desert. When he turned off the jet, he could hear the gyros whining. He turned the stablizer off and let it run down. Now there was only the chugging of the compressor, vibrating through his suit.

Alf was out of his buggy, standing at the base of the mountains, looking up.

"Come on," said Carter. "What are you waiting for?"

"Go on over if you want to."

"What's the matter? Are your gyros fouled?"

"Your brain is fouled, Carter. Go on over." Alf raised one arm holding it out stiffly. The hand showed flame, and Carter ducked instinctively.

The compressor had almost stopped, which meant the tank was nearly full. But Carter would be a fool to take off, before it was completely full. You got the greatest acceleration from an air jet during the first seconds of flight. The rest of the flight you got just enough pressure to keep you going.

But—Alf was getting into his buggy. Now the buggy was rising.

Carter turned on his jet and went up.

He came down hard, three hundred feet high, and only then dared to look down. He heard Alf's nasty laugh, and he saw that Alf was still at the foot of the mountains. It had been a bluff!

But *why* wasn't Alf coming after him?

The third hop took him to the top. The first downhill hop was the first he'd ever made, and it almost killed him. He had to do his decelerating on the last remnants of pressure in the jet tank! He waited until his hands stopped shaking, then continued the rest of the way on the wheels. There was no sign of Alf as he reached the foot of the range

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and started out into the desert.

Already the sun was about to go. Faint bluish stars in a red-black sky outlined the yellow hills behind him.

Still no sign of Alf.

Alf spoke in his ear, gently, almost kindly. "You'll just have to come back, Jack."

"Don't hold your breath."

"I'd rather not have to. That's why I'm telling you this. Look at your watch."

It was about six thirty.

"Did you look? Now count it up. I started with forty-four hours of fresh air. You started with fifty-two. That gave us ninety-six breathing hours between us. Together we've used up sixty-one hours. That leaves thirty-five between us.

"Now, I stopped moving an hour ago. From where I am it's almost thirty hours back to base. Sometime in the next two and a half hours, you've got to get my air and stop me from breathing. Or I've got to do the same for you."

It made sense. Finally, everything made sense. "Alf, are you listening? Listen," said Carter and he opened his radio panel and, moving by touch, found a wire he'd located long ago. He jerked it loose. His radio crackled deafeningly, then stopped.

"Did you hear that, Alf? I just jerked my come-hither loose. Now you couldn't find me even if you wanted to."

"I wouldn't have it any other way."

Then Carter realized what he'd done. There was now no possibility of Alf finding him. After all the miles and hours of the chase, now it was Carter chasing Alf. All Alf had to do was wait.

Darkness fell on the west.

V

Carter went south, and he went immediately. It would take him an hour or more to cross the range. He would have to leap-frog to the top with only his headlights to guide him. His motor would not take him uphill over such a slope. He could use the wheels going down, with luck, but he would have to do so in total darkness. Diemos would not have risen; Phobos was not bright enough to help.

It had gone exactly as Alf had planned. Chase Carter to the range. If he attacks there, take his tanks and go home. If he chooses to cross, he may be killed. Take his tanks. If he makes it, show him why he has to come back. Time it so he has to come back in darkness. If by some miracle he makes it this time—well, there's always the flare gun.

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Carter could give him only one surprise. He would cross six miles south of where he was expected and approach Alf's buggy from the *southeast?*

Or was Alf expecting that too?

It didn't matter. Carter was beyond free will.

The first jump was like jumping blindfolded from a ship's airlock. He'd pointed the headlights straight down, and as he went up he watched the circle of light expand and dim. He angled east. First he wasn't moving at all. Then the slope slid toward him, far too fast. He back-angled. Nothing seemed to happen. The pressure under him died slowly, but it was dying, and the slope was a wavering blur surrounded by dark.

It came up, clarifying fast.

The landing jarred him from coccyx to cranium. He held himself rigid, waiting for the buggy to tumble end-for-end down the hill. But the buggy was tilted at a horrifying angle, it stayed.

Carter sagged and buried his helmet in his arms. Two enormous hanging tears, swollen to pinballs in the low gravity, dropped onto his faceplate and spread. For the first time he regretted all of it. Killing Lew, when a kick to the kneecap would have put him out of action and taught him a permanent, memorable lesson. Snatching the buggy instead of surrendering himself for trial. Driving through the bubble—making every man on Mars his mortal enemy. Hanging around to watch what would happen—when, perhaps, he could have run beyond the horizon before Alf came out the vehicular airlock. He clenched his fists and pressed them against his faceplate, remembering his attitude of mild interest as he sat watching Alf's buggy roll into the lock . . .

Time to go. Carter readied himself for another jump. This one would be horrible. He'd be taking off with the buggy canted thirty degrees backward . . .

Wait a minute.

There was something wrong with that picture of Alf's buggy as it rolled toward the lock surrounded by trotting men. Definitely something wrong there. But what?

It would come to him. He gripped the jet throttle and readied his other hand to flip on the gyros the moment he was airborne.

—Alf had planned so carefully. How had he come away with one O-tank too few?

And—if he really had every thing planned—*how did Alf expect to get Carter's tanks if Carter crashed?*

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Suppose Carter crashed his buggy against a hill, right now, on his second jump. How would Alf know? He wouldn't, not until nine o'clock came and Carter hadn't shown up. Then he'd know Carter had crashed somewhere. But it would be too late!

Unless Alf had lied.

That was it, that was what was wrong with his picture of Alf in the vehicular airlock. Put one O-tank in the air bin and it would stand out like a sore thumb. Fill the air bin and then remove one tank, and the hole in the hexagonal array would show like a full moon in a clear, black sky. There had been no such hole.

Let Carter crash now, and Alf would know it with four hours in which to search for his buggy.

Carter swung his headlights up to normal position, then moved the buggy backwards in a dead-slow half circle. The buggy swayed but didn't topple. Now he could move down behind his headlights . . .

VI

Nine oclock. If Carter were wrong then he was dead now. Even now Alf might be unfastening his helmet, his eyes blank with the ultimate despair, still wondering where Carter had gotten to. But if he were right . . .

Then Alf was nodding to himself, not smiling, merely confirming a guess. Now he was deciding whether to wait another five minutes on the chance that Carter was late, or to start searching now. Carter sat in his dark cabin at the foot of the black mountains, his left hand clutching a wrench, his eyes rivited on the luminous needle of the direction finder.

The wrench had been the heaviest in his tool box. He'd found nothing sharper than a screwdriver, and that wouldn't have penetrated suit fabric.

The needle pointed straight toward Alf.

And it wasn't moving.

Alf had decided to wait.

How long would he wait?

Carter caught himself whispering, not loudly. *Move, idiot. You've got to search both sides of the range. Both sides and the top. Move. Move!*

Ye gods! Had he shut off his radio? Yes, the switch was down.

Move.

The needle moved. It jerked once, infinitesimally, and he was quiet.

It was quiet a long time—seven or eight minutes. Then it jerked in the opposite direction. Alf was searching the wrong side of the hills!

And then Carter saw the flaw

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in his own plan. Alf must now assume he was dead. And if he, Carter, was dead, then he wasn't using air. Alf had two hours extra, but he thought he had four!

The needle twitched and moved—a good distance. Carter sighed and closed his eyes. Alf was coming over. He had sensibly decided to search this side first; for if Carter was on this side, dead, then Alf would have to cross the range again to reach home.

Twitch.

Twitch. He must be at the top.

Then the long, slow, steady movement down.

Headlights. Very faint, to the north. Would Alf turn north?

He turned south. Perfect. The headlights grew brighter . . . and Carter waited, with his buggy buried to the windshield in the sand at the base of the range.

Alf still had the flare gun. Despite all his certainty that Carter was dead, he was probably riding with the gun in his hand. But he was using his headlights, and he was going slowly, perhaps fifteen miles per hour.

He would pass . . . twenty yards west . . .

Carter gripped the wrench. *Here he comes.*

There was light in his eyes. *Don't see me.* And then there wasn't. Carter swarmed out of the buggy and down the sloping sand. The headlights moved away, and Carter was after them, leaping as a moonie leaps, both feet pushing at once into the sand, a second spent in flying, legs straddled and feet reaching forward for the landing and another leap.

One last enormous kangaroo jump—and he was on the O-tanks, falling on knees and forearms with feet lifted high so the metal wouldn't clang. One arm landed on nothing at all where empty O-tanks were missing. His body tried to roll off onto the sand. He wouldn't let it.

The transparent bubble of Alf's helmet was before him. The head inside swept back and forth; sweeping the triangle created by the headlights.

Carter crept forward. He poised himself over Alf's head, raised the wrench high and brought it down with all his strength.

Cracks starred out in the plastic. Alf looked up with his eyes and mouth all wide open, his amazement unalloyed by rage or terror. Carter brought the weight down again.

There were more cracks, longer cracks. Alf winced and—finally—brought up the flare gun. Carter's muscles froze for an instant as he looked into its hell-

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ish mouth. Then he struck for what he knew must be the last time.

The wrench smashed through transparent plastic and scalp and skull. Carter knelt on the O-tanks for a moment, looking at the unpleasant thing he'd done. Then he lifted the body out by the shoulders, tumbled it over the side and climbed into the cabin to stop the buggy.

It took him a few minutes to find his own buggy where he'd buried it in the sand. It took longer to uncover it. That was all right. He had plenty of time. If he crossed the range by 12:30, he would reach bubble-town on the last of his air.

There would be little room for finesse. On the other hand, he would be arriving an hour before dawn. They'd never see him. They would have stopped expecting him, or Alf, at noon tomorrow—even assuming they didn't know Alf had refused to turn back.

The bubble would be empty of air before anyone could get into a suit.

Later he could repair and fill the bubble. In a month Earth would hear of the disaster: how a meteorite had touched down at a corner of the dome, how John Carter had been outside at the time, the only man in a suit. They'd take him home, and he could spend the rest of his life trying to forget.

He knew which tanks were his empties. Like every man in town, he had his own method of arranging them in the air bin. He dumped six and stopped. It was a shame to throw away empties. The tanks were too hard to replace.

He didn't know Alf's scheme. He'd have to test Alf's empties individually.

Already Alf had thrown some away. (To leave space for Carter's tanks?) One by one, Carter turned the valve of each tank. If it hissed, he put it in his own air bin. If it didn't, he dropped it.

One of them hissed. Just one.

Five O-tanks .He couldn't possibly make a thirty-hour trip on five O-tanks.

Somewhere, Alf had left three O-tanks where he could find them again. Just on the off chance—just in case something went terribly wrong for Alf and Carter captured his buggy, Carter still wouldn't go home alive.

Alf must have left the tanks where he could find them easily. He must have left them near here; for he had never been out of Carter's sight until Carter crossed the range, and furthermore he'd kept just one tank to reach them. The tanks were

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nearby, and Carter had just two hours to find them.

In fact, he realized, they must be on the other side of the range. Alf hadn't stopped anywhere on this side.

But he could have left them on the hillside during his jumps to the top . . .

In a sudden frenzy of hurry, Carter jumped into his buggy and took it up. The headlights showed his progress to the top.

The first red rays of sunlight found Lee Cousins and Rufe Doolittle already outside the bubble. They were digging a grave. Cousins dug in stoic silence. In a mixture of pity and disgust he endured Rufe's constant compulsive flow of words.

" . . . first man to be buried on another planet. Do you think Lew would have liked that? No, he'd hate it. He'd say it wasn't worth dying for. He wanted to go home. He would have, too, on the next ship . . . "

The sand came up in loose, dry shovelfuls. Practice was needed to keep it on the shovel. It tried to flow like a viscous liquid.

"I tried to tell the Mayor he'd have liked a well burial. The Mayor wouldn't listen. He said the Martians might not — *Hey!*"

Cousins' eyes jerked up, and the movement caught them—a steadily moving fleck on the crater wall. Martian! was his first thought. What else could be moving out there? And then he saw that it was a buggy.

To Lee Cousins it was like a corpse rising from its grave. The buggy moved like a blind thing down the tilted blocks of old glass, touched the drifted sand in the crater floor, all while he stood immobile. At the corner of his eye he saw Doolittle's shovel flying wide as Doolittle ran for the bubble.

The buggy grazed the sand, then began reclimbing the crater. Cousins' paralysis left him, and he ran for the town's remaining buggy.

The ghost was moving at half speed. He caught it a mile beyond the crater rim. Carter was in the cockpit. His helmet was in his lap clutched in a rigid death-grip.

Cousins reported, "He must have aimed the buggy along his direction finder when he felt his air going. Give him credit," he added and lifted a shovelful from the second grave. "He did that much. He sent back the buggy."

Just after dawn a small biped form came around a hill to the east. It walked directly to the sprawled body of Alf Har-

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ness, picked up a foot in both delicate-looking hands and began to tug the corpse across the sand, looking rather like an ant tugging a heavy breadcrumb. In the twenty minutes it needed to reach Alf's buggy the figure never stopped to rest.

Dropping its prize, the Martian climbed the pile of empty O-tanks and peered into the air bin, then down at the body. But there was no way such a small, weak being could lift such a mass.

The Martian seemed to remember something. It scrambled down the O-tanks and crawled under the buggy's belly.

Minutes later it came out, dragging a length of nylon line. It tied each end of the line to one of Alf's ankles, then dropped the loop over the buggy's trailer attachment knob.

For a time the figure stood motionless above Alf's broken helmet, contemplating its work. Alf's head might take a beating riding that way; but as a specimen Alf's head was useless. Wherever nitric oxide gas had touched moisture, red fuming nitric acid had formed. By now the rest of the body was dry and hard, fairly well preserved.

The figure climbed into the buggy. A little fumbling, surprisingly little, and the buggy was rolling. Twenty yards away it stopped with a jerk. The Martian climbed out and walked back. It knelt beside the three O-tanks which had been tied beneath the buggy with the borrowed nylon line, and it opened the stopcocks of each in turn. It leapt back in horrid haste when the noxious gas began hissing out.

Minutes later the buggy was moving south. The O-tanks hissed for a time, then were quiet.

—LARRY NIVEN

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by ARTHUR C. CLARKE

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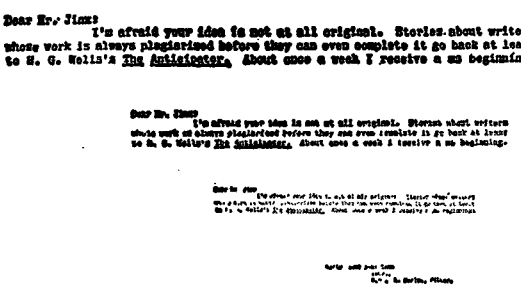
I'm afraid your idea is not at all original. Stories about writers whose work is always plagiarized before they can even complete it go back at least to H. G. Wells's The Anticipator. About once a week I receive a ms beginning:



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Better luck next time!
Yours,
Morris K. Mobius, Editor.

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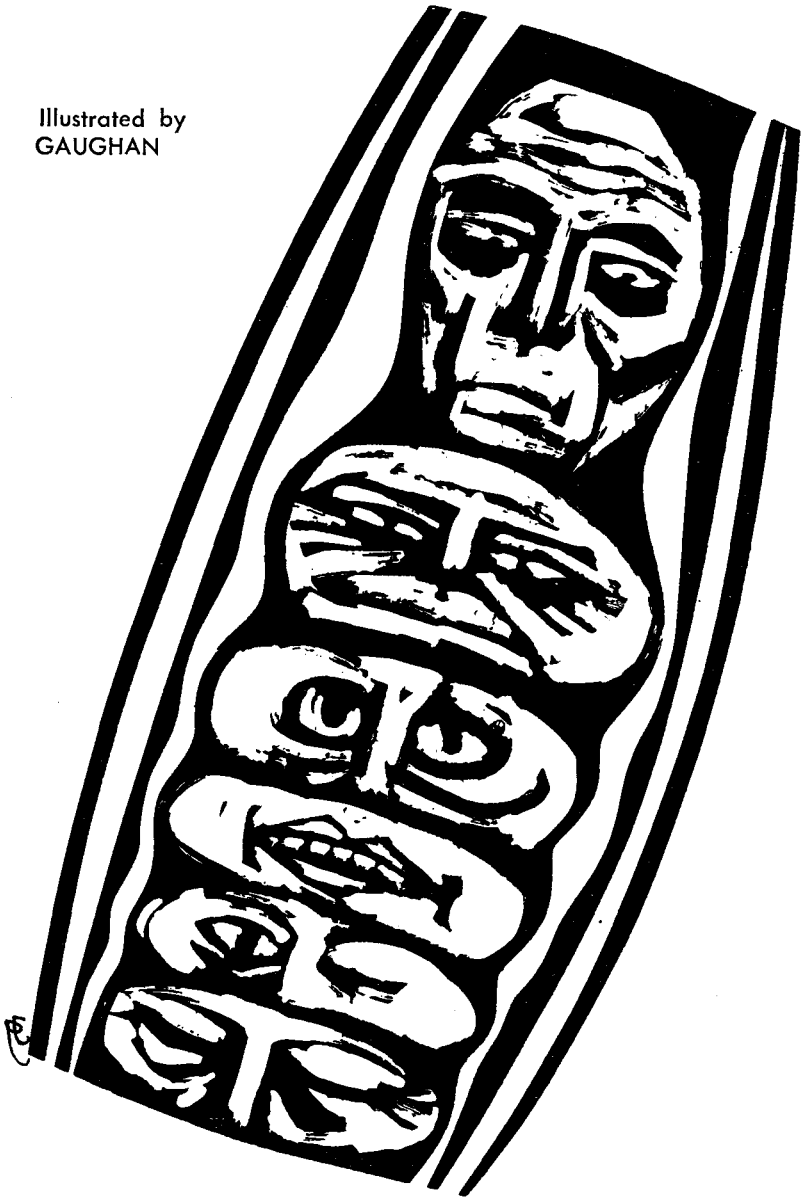

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THE SHIP WHO KILLED

by ANNE McCAFFREY

Illustrated by NODEL

The shell folk roamed around the galaxy in ships of steel. In fact, they were the ships!

I

Every diverted synapse in Helva's shell-encased body vibrated in unconditional revolt against the autocracy of Central Worlds Service.

"All haste, all haste," she snarled in her impotent revolt to her sister ship, the 822, on the private ship-to-ship band on which not even Cencom could eavesdrop.

The Seld-Ilsa snorted unsympathetically. "You're doing something which is more than I can say in Mediatior Service; I've spent weeks and weeks on end waiting for them to make up their minds which planetary cri-

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sis is most crucial. By the time we get there, critical mass has been reached, and we have a helluva mess to clean up."

"You think MedServ doesn't procrastinate?" Helva retorted sharply. "Why Jennan and I . . . " and she stopped, startled to have been able to mention his name.

Ilsa took advantage of the brief pause and grumbled on, oblivious to Helva's stunned silence.

"You'd think they'd've briefed use better in training. When I think of the situations I've already encountered that were never even mentioned! Theory, procedure, technique, that's all we were handed. Not a single practical suggestion. Just garbage, garbage, trivial garbage. They don't need brain ships, they need computers!" The 822 ranted on. "Stupid, senseless, unemotional computers."

Helva spotted the fallacies in the 822's complaints, but remained quiet. She and Ilsa had been classmates, and she knew from past experience the voids in the other's personality.

"I *heard*," the 822 said confidentially, "that your mission has to do with that blue block building in the hospital annex."

Helva adjusted her right fin scanner, but the oblong structure was devoid of any unusual feature that would indicate its contents.

"Have you *heard* when I'm supposed to hasten away from here again?" she asked Ilsa hopefully.

"Can't talk now; here comes Seld back. See you around."

Helva watched as the 822's brawn-half ascended to the airlock and the SI-822 lifted off Regulus Center Base. Seld had partied with Jennan in Helva one time when both ships were down at Leviticus IV. Seld had a passable bass, as she recalled it. Envy briefly touched her. She flicked back to the ambiguous hospital annex, savagely wondering what kind of emergency this would be. And would she remain an X-designate the rest of her service life?

She had set down at the end of the great Regulus field, the farthest edge from the Service Cemetery. Despite her resignation to Jennan's loss, despite Theoda's healing tears, Helva could not bring herself to grind more salt into her sorrow with proximity to Jennan's grave. Perhaps in a century or so . . . Consequently, waiting around on Regulus was painful. And with the 822 gone, she could no longer divert her pain into anger at the prolonged wait she must endure.

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"KH-834, your "brawn" is on her way with assignment tape," Cencom alerted her.

Helva acknowledged the message, excitement stirring within her. It was almost a relief to receive a double-initial call, the pleasure overriding her twinge of regret that her "brawn" partner was feminine. It was a relief, too, to experience any emotion after the numbing of Jennan's death. The Annigoni experience had broken her apathy.

A ground car zipped out from the direction of the massive Control and Barracks complex, skidding to a stop at her base. Without waiting, Helva lowered the lift and watched as a tiny figure hefted three pieces of baggage onto the platform.

"K" meant to stay a while, Helva decided. The lift ascended, and shortly her new "brawn" was framed in the open lock, against the brilliant Regulan sky.

"Kira of Canopus requesting permission to board the XH-834," said the young woman, saluting smartly toward Helva's position behind the titanium bulkhead.

"Permission granted. Welcome aboard, Kira of Canopus."

The girl kicked the limp lump of a fabric bag unceremoniously aboard. But she carefully carried the other two back to the pilot's cabin. The odd-shaped one Helva identified, after a moment's reflection, as an ancient, stringed instrument called a guitar.

Naturally they'd send me someone musically oriented, she thought, not at all sure she was pleased with this infringement on her most cherished memories of Jennan. She ruthlessly suppressed this unworthy thought with the admonition that the majority of Service personnel were musically oriented. The infinite possibilities of the art passed travel time admirably.

Kira flipped open the other compact case, and Helva, surreptitiously peeking, noticed it was full of vials and other medical equipment. Kira inspected the contents with quick fingers and, closing the case, strapped it with care against the rigors of acceleration on the shelves behind the bed.

Kira was, in form and nature as well as sex, the antithesis of Jennan. Since she was in a carping mood, Helva wondered how much of that was intentional. But that would mean Cencom had more sensitivity than Helva decided, privately, they were computationally blessed with.

Kira of Canopus couldn't weigh more than 40 kilos fully suited. Her narrow face with slanted

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cheekbones had a delicacy which appeared ill-suited to bear the euphemism of "brawn" for the mobile half of a Service ship partnership. Her hair, dark brown, was braided tightly in many loops around her long oval skull. Her eyes, wide set and almond shaped, were of a clear, cool, deep green, thickly lashed. Her fingers, slim and tapering, were as dainty as her narrow feet, oddly graceful in heavy shipboots. Her movements, swift and sure, were quicksilver, full of restless energy, dartingly inquisitive.

Kira reentered the main cabin. Helva, used to Theoda's lethargic movements, had to adjust quickly.

Kira inserted the order tape, locking it into its niche in the pilot's board. As the code ran through, a startled exclamation was wrung from Helva.

"Three hundred thousand babies?"

Kira's laugh was a staccato arpeggio of mirth.

"Assignment Stork, by the holies!"

"You're only temporary?" questioned Helva, trying to keep the irritation out of her voice. Even on brief acquaintance, there was a magnetism about Kira that appealed to Helva.

Kira smiled wryly. "This assignment will take some time. Only thirty thousand are collected already. Even in this day and age, it takes time to make babies."

"I haven't got facilities . . . " Helva began aghast at the thought of becoming a nursery. She broke off as the tape elaborated on the condition of the proposed cargo. "Babies in ribbons?"

Kira, who had had previous briefing on their mission, laughed at Helva's outraged reaction.

The tape continued remorsefully, and Helva understood the significance of the miles of plastic tubing and tanks of fluid which had been placed in her not overgenerous cargo spaces.

In the system of the star Nekkar, an unexpected radiation flare had sterilized the entire population of its newly colonized planet. A freak power failure had resulted in the total loss of the planet's embryo banks. The KH-834's mission was to rush embryos to Nekkar from planets which had answered the emergency call.

II

In the very early days of space travel, when man had still not walked on Mars or Jupiter's satellites, a tremendous advance had been made in genetics. A

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human fetus in its early stages was transferred from one womb to another, the host mother bringing the child to term and giving it birth without having an actual relationship to it. A second enormous stride forward in propagating the race of man occurred when a male sperm was scientifically united with a female ovum. Fertilization was successful, and the resultant fetus was brought to term, the child growing to normal, well-balanced maturity.

It became a requirement of those in hazardous professions or those with highly desirable dominant characteristics of intelligence or physical perfection to donate sperm and ova to what became known as Race Conservation Agency.

As civilization expanded onto newer, rawly dangerous worlds, the accepted custom was for young men and women to leave their seed with the RCA on reaching their majority. It was good sense to have such a viable concentration of genetically catalogued seed available. So that, given a lack say, in a generation of a particularly desirable ethnic group, sufficient additional embryos could be released to restore the ecological balance.

On an individual basis, the young wife, untimely widowed, might bear her husband's children from his seed on file at the RCA. Or a man, wishing a son of certain pronounced genetic characteristics to perpetuate a family name or business, would apply to the bank. There were, of course, ridiculous uses made of the RCA facilities: women in the thrall of hysteria over a noted spaceranger or artist would apply to the RCA for his seed if the male in question was agreeable. But naturally-conceived children were the rule rather than the exception. Helva herself had been the naturally inseminated child of her parents. The fact that some obscure birth defect had tendered her a grotesque, physical cripple was one of those curious, unpredictable accidents not even the most careful practice of prenatal care and obstetrics could avoid. She had been enlisted by her parents in Central Worlds' Brain-ship Service. By the time she was three months old, she had been transferred to a shell which, by means of by-passing the damaged synapses connecting brain impulses to extremities, had enabled Helva to start her education as the controlling agency of a sleek, powerful spaceship.

Generally, the RCA serves Central Worlds as a repository in case of just such an emergency as had arisen at Nekkar:

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the inability of individuals to propagate the race. An appeal had reached the Main RCA on Earth to locate and deliver 300,000 fertilized ova of genetic type similar to the Nekkarese. RCA had 30,000 on hand and had forwarded the call to all major RCA banks throughout the Central Worlds, asking for contributions which the KH-834 would pick up and deliver to Nekkar.

III

The tape ended with a silent hold cue to Helva. It took her a moment to realize that, though she had the mission information, she had received nothing on her partner. No matter how temporary this assignment, it would take time; and some basic biography would be essential for Helva to function effectively in partnership with Kira. Obediently she cut the tape, activating a record-store for the balance for later playback. It would appear there were many unusual factors in this assignment. Central Worlds moved in mysterious ways, itself to sustain.

"Well," Helva exclaimed to end the brief silence after the mission portion of the tape was silent. "I hadn't expected motherhood at my tender age. I see I had underestimated the demands Central Worlds makes of its minions."

Her attempt at levity touched off a violent response in Kira, and Helva wondered what under a first magnitude star had she got for a partner.

"Read this tape on me before we proceed with the mission," Kira said in a dead voice, all her previous vivacity wiped out.

She slammed the store button, shunting the mission tape to the ship files, and inserted a second reel. With an almost savage twist she turned on the audio, sitting stiffly erect and motionless as the tape played back, either deaf or impervious to the biograph.

Kira Falernova Mirsky of Canopus had finished all but a year of "brawn" training. She came of a Service-oriented family which had brought up ten generations to illustrious, once exalted, careers in Central Worlds' service branches. She had left the Training School on marital leave which had lasted two years, ending at her husband's death. A long term of hospitalization and therapy followed, during which time the tape noted that Kira had asked for and taken medical training, but did not reapply for "brawn" education. She had responded to a high level request to take this temporary assignment as her

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training had matched perfectly the needs of this particular emergency.

Then followed a rattle of personal indices, emotional, psychological and educational which Helva translated, as she was expected to, to mean that Kira Mirsky of Canopus would make an unusually fine "brawn" if she gave herself half a chance. The tape ended abruptly, as if there should be more. The omission, probably on the last tag of the mission reel, seemed to sing out its absence far louder than the tritest concluding evaluation or recommendations. Central Worlds had many devious facets, and perhaps such an obvious omission was one. Surely Kira sensed it. That damned biograph left too much unsaid, particularly apparent to a "brawn" trainee. Helva's mind danced with the possibilities and gnawed mental teeth against the silent hold-cue. In the meantime, Helva was faced with a very awkward situation, her new partner still with anticipation and predisposed by Central Worlds to make a bad first adjustment to Helva.

Helva made a rude, sibilant noise and was relieved to see Kira react in surprise to it.

"Brains they got?" Helva demanded contemptuously. "I don't call that a proper tape. They forgot half the garbage anyway. Ssscheh!" and she repeated her exasperation noise. "Oh, well, I expect we'll do fine together, if only because they left out the usual nonsense. Besides, the mission is temporary."

Kira said nothing, but the woodenness left her slender body as if an anticipated ordeal had been cancelled. She swallowed hard, licking her lips nervously, still unsure of her position, having steeled her nerves for something unpleasant.

"Let's get the cargo aboard and turn me into a rocking ship."

Kira rose, her body awkward, but she managed to smile at Helva's column. "With pleasure. Have your holds been outfitted?"

" 'With yards and yards of lacing and a bicycle built for two on it,' " Helva replied, quipping from an ancient patter song. She was determined to establish a comfortable empathy.

Kira's smile was less tentative, and her body motion became more fluid.

"Yes, it would look like that, I guess."

"Of course I've never seen a bicycle built for two . . . "

"Or a purple cow?" and Kira giggled girlishly. Helva ignored the nervous edge to the laughter, grateful the "brawn" did have such an active, if misplaced, sense of humor.

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"Hmmm. Purple cow, my dear brawn, is an all too apt analogy for our present occupation. And don't tell me I'll have room for 300,000 mechanical teats in the cargo space Central Worlds saw fit to give us."

"Oh, no," Kira laughed. "We don't have but the first hundred thousand accounted for as of the time the tape was cut. We'll swing out from Regulus towards Nekkar, picking up donations as we go, deliver them within the four-week time limit, when the fetuses must be either implanted or decanted, and swing around the Wheel until we do meet the quota."

Helva knew this from the tape. "Three hundred thousand isn't a very big number for a planetary population of a million that needs to expand."

"My dear KH-834," Kira savored the name, "the word 'temporary,' particularly when used by our beloved Service, has elastic qualities of infinite expansion. Also, another team, with drone transports, is recruiting orphans from unsocialized worlds to insure the proper age variations. But born children aren't *our* concern."

"The heavens be praised!" Helva muttered under her breath. She did not have room to transport active live bodies, and her one tragic experience

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with overcrowding as she outran Ravel's exploding sun was not likely to recommend a similiar occurrence.

Kira smiled back at Helva over her shoulder, as she contacted the Hospital Unit to request transfer.

Will you activate the pumping equipment?" she asked Helva, who was in the process of doing just that.

The miles of plastic tubing, once filled with the tiny sacs of fertilized ova, would contain the nutritive and amniotic fluids necessary for the growth of the embryos.

The continuous ribbon of tiny compartments, each with its minute living organism, was prepared for the voyage with the caution and care of a major surgical operation on a head of planet. Each segment must contact an intake point for the nutritive fluid and an outgo valve for the dispersal of wastes. Each meter of ribbon was inspected to insure the proper contact was made. The ribbon and its fluids as well as the encasing tube buffeted the embryos with more invulnerability against the rigors of space travel than had they been carried in a natural womb. As long as the KH-834 made the journey to Nekkar within the four weeks, all 30,000 fetuses would live to be born.

It became apparent to Helva that Kira was dedicated in a detached, if professional, way to the assignment. Central Worlds might be relying on a maternal instinct as additional insurance for the mission. Helva, to her inner amusement, found herself, the pituitarily inhibited shell-person, rising nobly to the challenge. Kira, obviously young enough to someday enjoy motherhood, was completely uninvolved. Yet the affinity Helva felt towards these minute voyagers was basically a shell reaction. They were, after all, encapsulated as she was, the difference being that they would one day burst from their scientific husks, as she never could nor even desired to. Still, she felt a growing protectiveness, above and beyond the ordinary, towards her passengers. The situation didn't appear to touch Kira's psyche, and that puzzled Helva.

She struggled to identify the coldness of Kira's reaction and could not. Then the technicians who had effected the installation of the precious cargo withdrew, and Helva was busy with the mechanics of take-off.

It was a pleasure to have a passenger who knew how to take care of herself. Not that Theoda

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had been a burden in the psychological sense of the word, but Kira knew the procedures, and Helva did not need to spare a thought towards her. Take-off was under minimum thrust, not that the triply-buffeted embryos could suffer damage had she blasted off with all power, but Helva preferred to take no unnecessary chances, and there was plenty of time to reach Nekkar in Bootes' sector.

IV

First planet of call would be Talitha where forty-thousand future citizens of Nekkar had been prepared. After lift, Kira made a careful check on all circuits in the nursery, confirmed her findings with Helva's remote monitors and informed Cencom that they were clear of Regulus and driving towards Talitha.

The formalities ended, Kira swung slowly around in the gimballed pilot's chair. Her slenderness lost in the padded armchair, she seemed both too fragile and too young for her responsibilities.

"The larder is well stocked," Helva suggested.

Kira stretched leisurely, slewing her shoulders around to ease the taut muscles across her back. She shook her head sharply, sending a shower of hair fasteners slithering across the cabin as her braids came tumbling out of the coronet. Helva watched fascinated. Shoulder-length hair was the common fashion among spacewomen. The tips of Kira's braids brushed the floor. Whatever maturity she possessed departed with the severe coiffeur. Like the prototype of an ancient fantasy creature, Kira rose from the pilot's chair and moved across the deck to the galley.

"You wouldn't by any remote computational factor stock a beverage known as coffee?" Kira asked wistfully.

Helva chuckled, remembering a similar plea from a med officer named Onro. It seemed to be an occupational necessity.

"I have three times as much as normal service inventory suggests," Helva assured her.

"Oh," Kira's eyes rolled upwards in mock rapture, "you *know!* The ship that brought me here was a provincial transport from Draconis and hadn't a drop on board. I nearly perished," she exclaimed with lavish emotion.

Kira flipped open the proper cabinet and broke the heatseal, sniffing deeply as the fragrant aroma arose from the heating liquid. She gulped down a sip, grimacing against the heat. With

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an expression of intense relief, she leaned against the counter. "You and I are going to do nobly together, Helva. I'm sure of it."

Helva caught the rasp of fatigue in the lilting voice. Would she always receive passengers in the advanced stages of exhaustion? Or was something the matter with Helva that all her visitors tended to fall asleep once aboard her? As a nursery ship this could be an asset, Helva thought acidly.

"It's been a long day for you, Kira. Why don't you get some rest? I'm staying up anyway."

Kira chuckled, knowing that the brainships never slept. She glanced towards the cargo holds.

"I'll listen with all ears perked," Helva reassured her.

"I'll just finish my coffee and take a short snooze," Kira agreed. At the cabin door she turned back towards Helva's column, cocking her head slightly, her green eyes sparkling.

"Helva, do you peek?" Her expression was prim to the pursing of her lips.

"I assure you," Helva replied with great dignity, "I am a very properly mannered ship, Scout."

"I shall expect you to conduct yourself decorously at all times as behooves a person in your position in life," Kira replied so haughtily, that Helva imagined her pedigree sprinkled with royal ancestors.

Head high, Kira stepped into her cabin only to trip on one of her swinging braids and tumble into the room. Helva was sorely tempted to get a glimpse of Kira's face.

"Don't you dare look in!" Kira exclaimed, her voice breaking with laughter.

Helva had promised nothing about turning off sound, and Kira got to her feet, giggling softly. In a very short while only the sound of a sleeper's shallow, slow breathing broke the stillness of the ship.

Helva took out of file the portion of the tape which followed the hold-cue. The excerpt was brief and enigmatic.

"Scout Mirsky is a practicing Dylanist, accepting this assignment in Central World Service without suspension of her craft. Accordingly she is not to be permitted shore leave on the following planets as her activities constitute an infringement of planetary laws restricting proselytization of government groups and/or an embarrassment to Central World Service: Ras Algothi, Das Alhague and Sabek. Subject Scout and Ship designate are not, repeat are not, to approach planets or stars Baham and Homan in the Pegasus

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Sector or planets of stars Beid and Keid in the Eridanus Sector."

Nothing could be clearer than that, but the reasoning behind such restrictions was unfathomable. And Kira was a practicing Dylanist, whatever that was. The name had a familiar ring, and the guitar which Kira cherished suggested a musical group of some sort. Well, mused Helva, she'd let it come up in conversation naturally.

The six days to Talitha were livened by Kira's rapid switches of mood and manner, from gamin to queen, welcome to Helva after both Theoda's stolidness and as counterpoint to her painful memories of Jennan. Helva literally did not know what Kira would do next. However, when it came time to check passengers, Kira was deftly professional and painstakingly thorough.

Dubhe, the second planet on their tour, called in to confirm a contribution of forty thousand fertilized ova, to be ready at the touchdown. Kira checked computations on ETA at Dubhe, arriving at the same figure simultaneously with Helva. Child she might look, child she might play, but Kira's working mind was sharp and accurate.

The transfer at Talitha went without undue incident because Kira's acute attention to detail averted the one possible accident. An attendant, too eager to finish his assignment, tripped over the leads to a fluid tank in the now crowded cargo hold.

Kira lit into him with a furious catalogue of his ancestors, his present worth, his future career potential and his probable imminent demise if he repeated his awkwardness. She did so in three languages, other than Basic, that Helva knew and several that had the advantage of sounding even more vicious. Yet the minute she had exhausted her choler, she turned, coolly collected, to the head of the detail with apologies.

Once lifted from Talitha, Kira shook loose the pins that held her braids and settled in the pilot's chair with a sigh of relief.

"I caught three of your descriptions of him, but the others were beyond me."

"I find that old Terran Russian, mixed with liberal neumagyarosag, is extremely vitriolic in sound," Kira said with a satisfied smile. "Actually I was only repeating a recipe for a protein dish called paprikash. It sounds much, much worse, doesn't it?" She grinned broadly at Helva, her green eyes wide.

"Effective, too. The oaf positively blanched."

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"Thorn . . . " Kira cut off her words, pressing her lips firmly together, her face, for one tiny moment, showing inner pain. "I think," she murmured, closing her eyes, "I'm hungry." Her voice was breathless, like a child's. "And," her eyes flashed open, her face composed again, "I think I shall make paprikash! Since, you realize, I have just furiously remembered the accurate recipe." She danced across the floor. "Taught me by an old gypsy." She waggled her finger at Helva. "Promise not to peek. It's a family secret."

She pivoted on her toes, round and round into the galley, laughing breathlessly as she caught the counter for support.

"Doesn't it smell heavenly?" Kira demanded of Helva, later pausing with the dish raised to Helva's column. "Be better with noodles and thick crusty bread. Hmm!" she mumbled happily over a full mouth. "Oh, perfect. I have not lost my touch." She touched her fingers to her lips, releasing a kiss to the air in the extravagance of gustatory enjoyment. "Marvelous." She curled her legs under her on the wide pilot's chair and ate quickly, licking her fingers occasionally when the stew splashed.

"You make me wish I wasn't nourished by a bunch of flagons," Helva remarked. "I've never seen anyone enjoy the simple business of eating as much as you do. And you don't seem to suffer from excess calories."

Kira shrugged negligently. "Excellent metabolism. Absolutely unalterable. That's me!" That fleeting edge of bitterness crept into the gay voice.

Helva began to suspect that these sudden switches of mood were less the product of a naturally volatile spirit than the elaborate defenses of a badly hurt woman, struggling to suppress her pain by overriding all references to it.

Helva remembered how carefully the guitar case had been stowed in the closet. Not so much as a hint had Kira made that it was there, silently waiting. Was this out of deference to Helva's recent tragedy? For surely Kira knew of Jennan's death and the legends that had already begun to cling to the 834. Or was Kira avoiding the guitar for a reason of her own?

Kira finished her meal. The dish lay on her lap. Her face was brooding, eyes fixed on a spot at the base of the control console.

Her whole attitude was apathetical and unhealthy. Helva knew she must break this mood. Kira had somehow been touched on too vital a point—despite the

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overtly innocuous conversation—to help herself.

Softly, without conscious choice from her wealth of musical references, Helva began to sing an old air:

Music for a while
Shall all your cares beguile;
Wond'ring how your Pains were eased.

"*How my pains are eased?*" hissed Kira, her eyes great, green globes glittering with hatred on the titanium column. "Do you know how my pain will be eased?" She was on her feet in such violent upward heave that there seemed to be no intermediate motion of rising. Tall in fury, Kira frightened Helva with the sudden strength in the slight body. "In death! In DEATH!"—and she held her arms straight up, wrists turned towards Helva so that she saw the thin white scars of arterial cuts.

"You . . ." Kira's arms dropped rigid to her sides. "You had the chance to die. No one could have stopped *you*. Why didn't you? What kept you living after *he* died?" the girl demanded with trenchant scorn.

Helva drew in her breath sharply, against the tantalizing memory of an anguished desire to dive into the clean white heart of Ravel's exploding sun.

"Do you realize that even if a person wants to die, it is not allowed! *Not allowed!*" Kira began to pace wildly, graceful even in this savage mood. "No. You promptly are subjected to such deep conditioning you cannot. Anything else is permitted in our great society except the one thing you really want—if it happens to be death. Do you realize that I have never been left alone in three years? And now . . . " Kira's face was contorted in ugly anger and contempt, " . . . now you're my nursemaid. And don't think for one moment I'm not aware you have had a confidential report on my emotional instability."

"Sit down," Helva ordered coldly and activated the final section of the mission tape with its restriction. As the import of the message reached Kira, she did sit, slumped lifeless in the pilot's chair, her face drained of all emotion.

"I'm sorry, Helva. I'm really sorry," she raised trembling hands in apology. "I just didn't believe they would leave me alone at last."

"They are very good at conditioning," Helva remarked softly. "They must be, and they have to be. They can't have ships or people going rogue from grief. But I think they have let you alone. They've merely

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made sure you can't get to those few worlds where ritual suicide is permitted, like Baham, Homan, Beid and Keid. And they can't allow you to commit suicide because the ethos of Central Worlds is dedicated to extending life and propagating it wherever and whenever possible. I'm a living example of the extremes to which they are willing to go to sustain a human life. The RCA is another aspect of the same ethos. For you to seek suicide means a breakdown in this ethos which cannot be permitted. Even the Pegasus and Eridani planets limit the conditions under which suicide is condoned and proscribe certain grotesque ceremonies to insure that only the most desperate attempt it.

"You'd think," Helva sighed with exasperation, "they'd figure out someway to alleviate loss, since Death is the one thing the great and glorious Central Worlds hasn't been able to cure."

Kira's tumbled hair hid her face from Helva's view. Even the slim fingers were motionless. The girl had abandoned herself to grief, and suddenly Helva was immeasurably irritated with this immolation in self-pity. True enough, she had been tempted to suicide, but her conditioning had held. She had keened her loss to black space, but she had lifted with Theoda to Annigoni and gone on with the business of living. Just as Theoda had after her own tragedy. As many people had all over the universe and throughout time. When her medical advisors had realized that Kira was wallowing in sorrow, they should have applied a block—oh, no, not when Kira had nearly finished "brawn" training; Helva remembered that factor. She had been made block-resistant, so the only therapy was intensive conditioning. They couldn't erase, only inhibit.

Helva looked dispassionately at her "brawn," furious at her situation, realizing that Central Worlds had known exactly what they were asking of Helva when they assigned Kira to her. That, too, was part of the ethos. Use what you have that will get the job done.

"Kira, what is a Dylanist?"

The lowered head jerked up, the curtaining hair falling away from the face. The scout blinked and turned to stare at Helva's bulkhead.

"Well, that is the last question I would have expected," she said in a quiet voice. She gave a little snort of laughter and then tossed her head, shaking her hair out of her way. She looked at Helva thought-

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fully, speculatively. "All right. I'll absolve you of the guilty crime of psychotherapy. Altho'," Kira began pointing an accusatory finger at the column, "I was coerced to make this mission, and I thought it awfully suspicious that *you* were to be my ship."

"Yes, that would follow logically, wouldn't it?" Helva agreed calmly.

Kira laid a slim hand on the bulkhead, on the square plate that was the only access to Helva's titanium shell within the column. It was a gesture of apology and entreaty, simple and swift. Had Helva been aware of sensory values, it would have been the lightest of pressures.

"A Dylanist is a social commentator, a protestor, only with music. A skilled Dylanist, and *I* wasn't one . . . " (from the emphasis on the pronoun, Helva assumed that Kira considered her husband, Thorn, had been one) " . . . can make so compelling an argument with melody and words that what he wants to say becomes insinuated into the subconscious."

"Subliminal song?" Helva questioned.

"Well, haven't you been haunted by a melody?" Kira paused at the door of her cabin.

"Hmmm, yes, I have," Helva agreed, not sure that the theme from Rovolodorus' *Second Celestial Suite* was exactly what Kira had in mind. Still the point was well taken.

"A really talented Dylan stylist," Kira continued, returning with the guitar case, "can create a melody with a message that everyone sings or hums, whistles, spits or drums in *spite* of himself. Why, you can even wake up in the morning with a good Dylan-styled song singing in your head. You can imagine how effective that is when you're proselytizing for a cause."

Helva roared with laughter. "No wonder you'd be considered an embarrassment to Central Worlds on the Ophiuchus circuit."

Kira grinned impishly. "I got the chapter, verse and section on *that,* plus what a waste of time, talent and ability that could be put to worthwhile use in service to C.W."

She made a face as she struck chords, sour from long disuse. She tightened the keys, tuning the chords up from the bass string, her expression unexpectedly tender as she worked. She struck a tentative chord, tightened the E string a fraction more and nodded satisfac-

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tion at the resulting, mellow sound.

With flashing strong fingers she wove a pattern of chords and notes, drawing more volume from the instrument than its fragile structure suggested. To Helva's amazement, she recognized an ancient Bach fugue just as Kira struck an angry discord, clamping both hands on the strings to keep them from resonating.

"Achh," she exclaimed, sharply flapping her hands and then clenching them into tight fists. "I haven't played since . . . " She struck a major chord, then modulated to a diminishing minor. "I remember we spent one entire night — till noon the next day, actually — trying to analyze an early Dylan song. The trouble was, you weren't supposed to analyze Dylan. You had to feel him, and if you tried to parse what he was saying into Basic or into psychological terms, it . . . it was meaningless. It was the total imagery of the music and the words that made the gut react. That was the whole purpose of his style. When the gut reacts, the mind gets the whiplash, and another chip is knocked off the solid block within."

"I'd say his work might be good therapy," Helva remarked dryly.

Kira flashed her an angry look which dissolved into a grin. She made her guitar laugh. "The trouble with therapy is you tend to find too many confusing alternative meanings to the simplest notions and words, and then you're so confused, you suspect everyone and everything." And Kira's guitar echoed the pitch of her words derisively.

A red warning light flashed on the panel simultaneously with an impulse to Helva's internal monitors. The guitar was the sole occupant of the pilot's chair, and Kira was halfway down the passageway to the number three hold before Helva could activate her own visual check.

Kira paused at the door long enough to assess the damage, before she spun to the further hold where their additional supplies were stored.

The clumsiness of the technician had, to all scrutiny, been remedied at the time of the accident by securing the tubing in the demijohn of nutritive fluid. What had not been apparent at that time was that the closure at the other end of the line had been loosened. Sufficient fluid had dripped away from the weakened joint to register on the telltale. Helva anxiously checked with her

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magnified vision along the section of embryos that tank serviced. There was loss at the joint but the ribbon was still full.

Kira was back with new tubing and joints. Deftly she removed the faulty equipment, careful in her transfer to prevent air bubbles seeping in along the ribbon. Then Kira carefully checked the entire length of ribbon and each minute sac under magnification to make certain there were no visible bubbles or disruptions to the contact between sac top and the nutritive nipple fastening.

Then she checked the joints in the other ribbons, each line, each flask, every connection. It was a job of several hours duration, but she made no attempt to hasten the process.

Reassured, she and Helva did another check of the internal monitors before she closed the hatch.

"I should have cut him up and made him into the paprikash. That would have served him right!" Kira muttered as she disappeared into the privacy of her cabin.

Helva eavesdropped until she heard the slow, even breathing. All the while, the still guitar stared back at her from the pilot's seat, threads of that haunting melody taunting Helva as she watched.

V

At Dubhe, Kira listened on an elaborate spectrum inspection of the disturbed ribbon to make sure none of the several thousand fetuses within the strand had suffered impairment. Whatever emotional problems tormented Kira, she held them apart from her professional life. Her objectivity was appreciated by Helva the more because she had had a glimpse of Kira's personal turmoil.

The KH-834 sped onward from Dubhe to Merak where another twenty thousand waited. On the short voyage between Dubhe and Merak, neither Kira nor Helva mentioned what Helva styled "the paprikash incident." Kira did not put the guitar away either, but spent some time every "evening" giving Helva additional samples of Dylanist wit and social penetration, from the ancient dream songs of the Protest Decade in early Atomic history to examples of contemporary protests.

When the call from Alioth came, it interrupted Kira's masterful rendition of a very early Dylan, "Blowin' in the Wind."

Kira laid aside her guitar

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carefully and answered the call, her face registering polite surprise at the origin.

"Fifteen thousand?" she repeated for confirmation and received what Helva felt was an unnecessarily curt rejoinder and cut off.

While Kira had been dealing with the call, Helva had activated the ship's memory files for facts on the planet.

"That's odd," she remarked.

"How so?" asked Kira, jotting down eta computations.

"There's no record of their having a bank. Grim planet. In a highly unstable volcanic period. Use a lot of molten mining techniques. Highest mortality rate in the Central Worlds."

"I think," commented Kira dryly, "you'd better see what Cencom has to say about *our* landing there."

"It's not on the restricted list, Kira," Helva replied, but she activated the tight beam.

"Alioth?" Cencom exclaimed, surprised out of its formal voice. "The mayday didn't go out to them as we have no record of a bank there. Ethnically speaking it's possible. Hold."

Kira cocked an eyebrow at Helva. "They're checking with I know who. Two gets you one they abort the call."

"Two gets me one of what?" jibed Helva.

"KH," Cencom returned. "Proceed to Alioth. No bank listed, but traders report improvements in mining techniques indicate technological advances at proper level for race propagation. Religious hierarchy powerful, so do not antagonize. Repeat, do not antagonize. And report soonest."

"You just lost two whatever it was you bet," Helva taunted.

"Okay," Kira said with a shrug. "Filmbank have any clips?"

Helva flashed them on the viewer. The first were aspects of the small spaceport. The main city was dominated by an enormous temple against the side of an extinct volcano: the broad multiple steps leading to it reminding Helva of a ziggurat. She didn't much care for worlds with a religious hierarchy, but she appreciated the fact that her opinion was at the moment jaundiced. Too many religions were gloom and doom. Alioth, fourth planet of its solar system, was far enough out from its primary to get little of its brightness, and its volcanic era predisposed it to Dantean excesses.

One last scene showed a procession of torch-bearing, cowled figures crossing a huge central plaza in front of the temple.

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"A truly cheerless place," Kira commented, making a face. "Well, with only fifteen thousand, we won't have to stay long." She strummed a gay tune to counteract the morbid pictures.

"They *are* in the ethnic group required by Nekkar," Helva remarked dubiously.

"Can't see a thing with all those hoods," Kira said. "You don't suppose the embryos come complete with cowl, do you? That'd be a facer for the Nekkarese," she giggled, adding a guitar laugh.

"You should say, born with a caul."

Kira threatened Helva with the guitar, then made her inspection of the three holds.

"This extra fifteen thousand will crowd us a little with the 20,000 at Merak," Kira mused as she worked.

"Alioth is spatially alligned with Nekkar. We can make it there with time to spare. Then, hoiyotoho off on another stork run."

Kira straightened, wrinkling her nose in Helva's direction.

"Hoiyotoho is utterly inappropriate to a stork run."

"For you, maybe, but not for me. I am, after all, an armored maid."

"Ha!" Kira barked, and she fell silent as she peered through a magnifying lens at a joint.

When the two had finished the inspection, Kira paused at the galley, reaching absently for coffee. She wandered, moody for the first time in nearly a week, into the main cabin and plunked herself down on the pilot's chair, curling her feet under her and sitting quietly, only the curling vapor of the heating coffee moving.

"Stork run!" she said finally. "D'you realize, Helva, I'm the same ethnic group, too? Those pieces of life are the children of people like me. Only unlike me. Because they have left seed, and I have none."

"Don't be ridiculous," Helva snapped, hoping to ward off a Kiran explosion. "You fulfilled your RCA duty when you reached your majority, didn't you?"

"No," Kira laughed back. "No, *I* didn't. I had met Thorn by then, and *I* was going to have all my children. I didn't need any agency to insure the propagation of those chromosomes that are essentially Kira Falernova Mirsky of Canopus. As a matter of fact," she said sardonically, "I even wrote a Dylan on the RCA, full of wit and drollery, with candid cracks about the uncanned child."

She swung the chair around

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to face Helva, her eyes narrowed in self-contempt.

"One of the many items my so-censored biograph left out was that my only child died a-borning, from his mother's womb untimely ripped, ripping it and rendering her completely barren."

Kira spanned her tiny hips with slender hands. "No life in these loins, ever . . . not implanted nor impregnated. No nothing of Thorn or all we had together. That," and she snapped her finger, "for our supreme egotistical self-assurance."

It was for such accidents that the RCA recommended seed donations from every young adult. It was pointless to remind Kira of this. She was all too patently aware of her folly.

"That's why I returned to medicine after Thorn's death rather than to the Service. But all my studies proved that there was no rebirth in me nor birth for me. Science can do many wonders, make many adjustments, but not that."

She sighed heavily, but her bitterness was not as frantic as that first explosion. Helva wondered if Kira had resigned herself to barrenness as she had not, from appearances, resigned herself to living.

"Which is why, dear Helva, it is ironic for me, of all people, to be assisting this particular cargo around the Great Wheel."

Helva refrained from any remarks. Kira finished her coffee and retired to rest. Within a few hours, there would be Merak to deal with, then on to Alioth.

VI

They cleared Merak in record time, the technicians being both quick and careful. Alioth was only a few days onward before the last hop to Nekkar. Scout and ship had now achieved a pleasant routine in which Helva filled gaps in her classical and ancient musical repertoire with Kira's comprehensive acquaintance with folk music from old Terra and the early colonial periods of the now major worlds.

Helva woke Kira just before touchdown on Alioth. The scout dressed quickly in a somber tunic, braiding her hair so closely to her scalp Helva wondered her head didn't ache.

Touchdown was not auspicious. To begin with, the spaceport was overshadowed by the jagged, glowing peaks of Alioth's active continental spine. They were told to touch down some distance from the small rectangular building that housed what control and administration the unhospitable planet requir-

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ed. Kira protested they were too far from the building to effect a quick transfer and was brusquely informed she was to await the arrival of a ground vehicle. It took its time in arriving, a huge transport truck loaded with cowled figures which took positions around Helva's base, elbow to elbow. Their attitude was suspiciously belligerent, their presence an insult to a ship bearing Helva's markings.

"What is the meaning of mounting a guard on a scout ship in Central Worlds Medical Service?" Kira demanded in firm tones of control tower.

"For the protection of your cargo."

At this moment, the charge officer of the guard contingent requested permission to enter the scout ship.

"Well?" Helva asked softly of Kira.

"I don't see we have much choice, but I suggest you tape this audio and visual and encode it back to Regulus."

"My thought, too," Helva agreed thoughtfully. "I think I'll play silent."

"A good idea," Kira admitted, adjusting a contact button on her cloak.

There were many backward planets, where the partnership of the mobile "brawn" scout and his "brain" ship was improperly understood. On such worlds it often had been to the advantage of the partners to keep the "brain's" abilities unknown until needed, if needed. The button would allow Helva to keep in sight and sound contact with Kira.

The officer, an ominous, tall figure in its black cowl, appeared at the airlock which Helva opened. The man, his face unseen, towered above Kira. A thin hand was extruded from the draperies and made a gesture towards breast and hidden face that could be interpreted as a salute of sorts.

Kira responded in kind, waiting for him to speak first.

"Second Watch Officer Noneth," he finally intoned.

"Medical Scout Kira of Canopus," Kira replied with dignity. Helva did not fail to note that the girl clung to her planetary designation rather than a ship-partner identity as KH-834.

"Your presence is required at High Temple to discuss the donation," Noneth said in hollow, measured tones.

"Time is of the essence in a transfer of this nature," Kira began smoothly.

"Time," intoned the officer, "is at the disposal of Him Who Orders. It is at his command you are to come."

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"The seed is ready for shipment?" Kira asked, insistent on some information.

A shudder rippled the fabric surrounding the figure on Noneth.

"Do not blaspheme."

"Unintentional, I assure you," Kira said, calmly refusing to offer further apology.

"Come," ordered the officer in a voice of command that crackled with authority.

"He Who Orders bids you come, woman," a sepulchral, harsh voice echoed shrilly through the tiny cabin.

Kira won another mark of respect from Helva, when she gave no indication of surprise at that awesome bellow. The scout's eyes flicked briefly over the smooth, oval fastening on Noneth's hood. Helva as well as Kira recognized the device for what it was, a two-way control similar to the one Kira wore — a type issued only through the Scout Service.

There'd be a nova of a scandal when Central Worlds discovered who was distributing these restricted designs on backward planets.

"The order must be obeyed. The Temple itself has spoken," Noneth cried in a voice quavering with reverance. "Dally not."

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The Temple was feminine, Helva realized, having appraised the timbre of the voice.

"I am under orders," Kira began evasively.

"That is the Eternal Truth." Noneth replied, nodding as Kira apparently responded in a manner consonant with solemn accord, his religion. He raised his hand in a stylized gesture and added, "May Death come to you at the moment of your triumph."

Kira, about to make a graceful obeisance, halted and stared up at the hidden face, her eyes wide with shock.

"May Death come to you at the moment of your triumph?" she murmured. The blood drained from her face.

"Is not Death the greatest of blessings?" asked the priest, mildly surprised at her ignorance.

It was all Helva could do to remain silent, but a deep instinct stifled her half-formed groan of protest. It took little extra interpolation to surmise that Death on Alioth would be the greatest of blessings: relief from the terrible drudgery, the grim and gloomy aspect of the planet with its hovering smoking mountains. The normal perils of molten mining plus the daily anxiety of a volcano emerging and erupting underfoot had emphasized the brevity of existence until the emphasis had swung towards Death as a welcome respite from grinding toil and miserable conditions. Was Cencom out of its alleged mind, when it did not ban Kira from landing on Alioth, knowing her compulsion? She wouldn't even have to strain against her conditioning.

"Yes, Death is the greatest of blessings. That is Eternal Truth," Kira repeated, trance-like.

"Come with me," Noneth enjoined, gently persuasive, his gaunt hand beckoning to Kira. "Come," echoed the sepuchral voice greedily.

The ground car had no sooner left the base of the KH-834 than the guard began to move.

"She will see Him Who Orders," one sighed enviously. "The bare-faced harlot will be given an unjust Reward. Now! Up the lift and let us secure the cargo. Think of it! Thousands more to die to expiate the sin against Him Who Orders."

That was sufficient for Helva. She locked the lift controls and slid the airlock securely tight. Curse, hammer, buffet though those Aliothites might, Helva was invulnerable against

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such weapons as Alioth's technology possessed. She activated the tight beam to Cencom. Alioth would rue the day its religious hierarchy decided to hijack the cargo of a Service Ship. Much less kidnap its scout.

Dispassionately Helva took account of the matter of Kira's departure. The girl had, in the extremes of grief, sought death. But Helva doubted Kira would betray her service. For one thing, she couldn't, although the Aliothites didn't realize the ship was capable of independent thought and action. Having enticed the scout away, they assumed the ship was grounded, impotent, and they could take their time forcing the scout to accede to their designs on the embryos.

I could just leave, Helva thought. If Death is the reward these zealots seek, then I have no compunctions about burning the guard detail to its due merits. But I cannot leave this "brawn". Not yet. I have time. What was the matter with Cencom? They were never around when you needed them! And why in the name of little apples did they permit Kira to land on a death-dedicated planet? You idiot, Helva told herself, because they didn't know that's the way the religion turned.

The ground rumbled beneath her. Far to the north a fireball zoomed heavenward, bursting in a shower of lighted fragments. Other fireworks followed as well as more ominous movement beneath Helva's tailfins. She held herself ready for an instant lift-off if her balance was shaken beyond normal recovery in her stabilizers. Somewhere to the northeast, another volcano answered the first.

Helva saw the ground car carrying Kira reach the central building, and she muttered, ineffective mental commands for Kira to snap out of her trance and switch on the contact button.

The guard, impervious to the massed eruptions, kept right on trying to force the lift mechanism. Their cowls kept falling from their faces, and they kept replacing them as if a bareface were indecent. The red light from the fireballs which continued to light the sky illuminated gaunt, ascetic faces, dirty with ingrained volcanic dusts, dull-eyed from improper nutrition and continual fatigue.

Kira alighted from the transport and, flanked by guards, was escorted to a smaller vehicle which disappeared from Helva's augmented vision into the complex of city buildings. The transport turned back to the field and Helva.

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One more enterprising guard urged his fellows to bring a gantry rig against the ship. This they did, slowly and with much effort, wheeling the unwieldy frame from a far side of the field. Helva watched the performance with grim amusement. Their own fault for insisting we set down so far from the facilities of the port. Perhaps they couldn't see in the gloom of Alioth's perpetual twilight that the lock was closed tight, too.

She tried to rouse Cencom on the tight beam, cursing at the delay, furious she was unable to reach Kira on the contact.

"Contact button," she muttered to herself, recalling the anomalous appearance of one on Noneth's hood. Now, if it were actually either Service issue of an imitation, she ought to be able to use it. And that Temple female had utilized one to second Noneth's commands to Kira.

Helva wasted no time in throwing open the wide-wave on the contact band. As hastily, she closed it, dazed with the resultant chaotic kaleidoscope of sight and sound that besieged her unsuspecting senses. Mentally reeling from the impact, she wondered painfully how she had managed to get several hundred thousand contacts at once. Quickly she scanned the scurrying guards, still trying to wrestle the gantry frame to her. Each one had a button securing his hood at the throat.

"Great glittering galaxies," moaned Helva. "That Temple female's got them by the throat. This religion must be composed of schizoids to deal with that kind of chaos."

Holding tightly to her sanity, Helva opened the band a fraction, wincing at the confusion of sound and sight. She tried to focus in on one contact alone, but felt herself drowning in the myriad pictures that returned. It was like trying to focus on a pinpoint through the faceting of a fly's eyeball.

Grimly she diminished the band into one small area, forcing herself to accept only one of the conflicting and overlapping images that returned to her. She cut out the sound completely. Fortunately every wearer in the selected segment was converging on one location, crossing a huge plaza, crowded with gyrating, swaying cowled figures, their robes flapping around them as they approached the wide deep steps that led up the side of the dead volcano. This was the ziggurat Helva had noticed in the tape clip.

Suddenly everything and

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every figure tilted. It took Helva a moment to realize she too was rocking with the earthquake as three more volcanoes spewed out their guts skyward. She waited, alert, lest the instability of the spaceport field became too critical for her to remain planetbound.

An ecstatic, moaning roar wafted through the air which was becoming hazy as the earth's minute shift released gases from narrow fissures in the floor of the plaza. Helva, already confused, did not at first catch the significance of the gas or the fact that the ululation was reaching her ship's outer ears, not issuing from the dumb contact circuits.

Frantically Helva increased power in the tight beam, desperately trying to raise Cencom over the volcanic interferences. Simultaneously she cut in the narrow contact, not able to risk losing Kira. Everyone in the plaza was now waving arms aloft, hoods thrown back from joyful faces raised to the spark-filled, gas-fogged skies. Then the Aliothites wheeled, ducking their heads to breathe deeply of the rising gas fumes. Incredulous Helva watched as more and more people pushed and crowded around the fissures, inhaling deeply, staggering away, faces rapt, arms aloft, movements erratic. Stunned, Helva realized that the gases were either hallucinogenic or euphoric, deadly dangerous as senses were dulled to the perils of wandering in the open during mass volcanic eruptions. Yet the exposed plaza was rapidly filling with bodies either already intoxicated or frantically trying to achieve it.

The significance of gas eruptions in the plaza before the Temple of this demoniac religion was not lost on Helva. This effect was known and calculated by the temple hierarchy. Helva was revolted and enraged by such a depraved government, and she redoubled her efforts to locate Kira and her escort. They would have to leave the vehicle and enter the plaza on the south side. One multiexposed group caught her searching eyes. There couldn't be two such slender, hoodless figures on this mad planet. Kira was just entering the plaza, her inexorable progress towards the ziggurat steps impeded by the jerking, jolting freak-inebriates.

Frenzied, Helva widened the band, trying to skip from contact to contact, forward towards Kira. The effect was maddening, like seeing thousands of film tapes all interlocking fuzzi-

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ly, playing on the same master screen. For the first time in her life, Helva felt vertigo and nausea of the mind .Her sense of impending disaster deepened as she tried to reach Kira before she entered the Temple of Death. Placed as it was on top of the massive ziggurat, right next to the old volcano, it must be heavy with hallucinogenic gases. Helva thanked the Service for the small blessing that Kira had been desensitized to such hazards as hallucinogens, but she was as immobile in her trance as if she were susceptible.

VII

Helva groaned at her inability to reach Kira, spiritually or physically.

"Ooooh," an answering groan rose from the multitude. "The Temple weeps," the cry went up, garbled from a thousand throats. Even the guards at the spaceport, wrestling with the gantry frame, echoed the chant.

"Oh," Helva gasped, and her surmise that she was broadcasting to all Aliothites was confirmed, as her exclamation was repeated by the crowd. She had been mistaken for the voice of their Temple female.

Oblivious to the multivision, Helva stared at the cylindrical top of the Temple and recognized what she had not consciously identified before. The cylinder was a ship on its long axis, nose and fins buried in the lava of the old eruption. The Temple entrance was nothing more than an airlock, and by that entrance, Helva could trace the faintly visible designation of a Central Worlds brain ship.

As clear as the day she had heard it, the day Jennan had died, Helva recalled what Silvia, the 422, had told her about another grief-stricken ship. The 732 had turned rogue after the death of her scout on the metal-heavy planet of a white dwarf. Where better to hide than a red-dark violent world, so conducive to the immolation of grief? Or had the 732, aimed at the fiery maw of the erupting volcano, somehow been deflected from the seething cone at the last moment to be lodged immovably in the lava flow at its base? Had the 732 turned her tortured mind on the grim world and urged thousands to die in expiation for the death of its beloved?

The requirements of her duty were suddenly lucid to Helva, and the plans to discharge it sprang to mind. Unconsciously and with the genius of sheer desperation, Helva began to sing, her voice a deep caressing

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baritone, coloring her resonances with minor-keyed longing, suspending reason to the dictates of sheer instinct.

Death is mine, mine forever.

She intoned, repeating the phrase a third above, as the responsive Aliothites chanted the first phrase in obedient mimicry. It was like having an incredibly well-rehearsed world-chorus at your disposal. Helva immediately exploited the phenomenon ruthlessly:

Sleep I cannot, rest eludes me.

And down a fifth:

Dreams to plague me, tortured I.

Up to an augmented seventh as the chorus chimed in on a dissonance, calculated to raise inner hackles and pierce the gut with longing:

Let me sleep, let me rest, let me die.

Helva sang, her voice sliding into the edged timbre of a harsh yearning tenor.

Down again to the original musical phrase, but this time the baritone quality was tinged with scorn:

Death is mine, mine forever.

Let me sleep, let me rest, let me die.

The last word became a vibrant crescendo of derision, diminishing to a mocking whisper, long after the supporting chorus had completed its cry on the augmented seventh.

"Cencom calling KH-834, will you acknowledge? ACKNOWLEDGE?" the hard, official voice of Regulus Base Cencom broke through Helva's fantastic musical improvisation.

"Mayday, mayday," Helva replied in a jolting soprano on both tight beam and the Aliothite contact band. The chorus obediently shrilled out the resounding emergency challenge. Helva caught her breath, as she saw Kira stagger with instinctive reaction to the cry.

"Mayday?" Cencom blasted back. "Who the hell is Dylanizing on Alioth?"

With a shock, Helva realized that was exactly what she was doing, Dylanizing. Her appeal to Kira, though couched musically — music being the one medium she subconsciously hoped would reach the entranced scout — had crystallized further into the subliminal form of a Dylanesque protest. Exultant, she knew how to manipulate this to her own ends. With a barely perceptible increase in tempo, she repeated her first phrase, no longer a longing legato, but a mocking staccato. As the chorus responded idiotically true

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to its model, she hurriedly reported to Cencom.

"Alioth's religious head is the rogue ship 732; the religious motivation is death!"

"The scout, where is your scout?" Cencom crackled back as near panic as it would ever come.

"What is the release word for the 732?" Helva hissed, then chanted the second phrase for her Dylan, again packing up the tempo so that the beat as well as the sound had urgency to it.

"Why are you Dylanizing? Report!" Cencom demanded, outraged.

"Don't bother me. The release word!" Helva snarled. She jumped her voice an octave and a half, switching registers to heldentenor, her phrase ringing through the plaza in an arrow of sheer emotion-packed sound to pierce the trance of her scout.

Kira's guard was lurching now, half-dazed by the treacherous fumes that filled the plaza. They had Kira by the arms, and Helva trapped in the background of the mighty chorus, couldn't tell whether they were restraining Kira or hanging onto her for support. She alone was unaffected by the hallucinogen.

"Let me sleep, let me rest, let me die!" Helva's tenor rang, scornfully, lashing viciously at Kira's deathwish.

"You fool," Cencom mouthed in sheer rage, "don't say that! She wants to die!"

"GIVE ME THE RELEASE WORD!" Helva screamed at the tight beam in a strident soprano. Then projected her voice, bitterly powerful, angrily compelling, thundering the protest.

"Let me sleep, let me rest, let me die!" The phrase echoed tauntingly through the plaza. The chorus, unable to imitate the incredible pitch of Helva's voice, dropped to the lower octave. The challenge rocked back across the plaza, punctuated by the massive thunder of erupting volcanoes.

With a sudden, soundless, soul-shattering wrench, the massed glimpses of chaos dissolved, and Helva was suddenly of single sight, in a darkly curtained chamber, unevenly lit by red braziers. Increasing her dark vision, Helva penetrated the gloom, her attention focused on the hideous object that dominated the room.

VIII

On a raised, black basaltic slab lay the decomposing remains of what had once been

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a man. Its teeth were bared whitely through the decayed flesh in a travesty of a smile. The tendons of his neck were stark ridges, and the cartilage of his isophagus ended in the indestructible fabric of a scout coverall. His bands, crossed on the chest cavity, crumpled by a massive fatal blow, were linked by the intertwined post-mortal growth of fingernails. This, Helva knew, was the 732's dead "brawn".

And Helva was watching through Kira's contact button.

A wailing chant filled the chamber, a meaningless mournful dribble of sound, emanating from the walls, the ceiling, the floor. The mad "brain", still encased in its indestructible titanium shell, had all circuits open, keening, oblivious to everything.

In as soundless a whisper as she could broadcast, Helva mutterel swiftly to Kira. "It's the rogue 732. It's gone mad. It's got to be destroyed." It was easier somehow for Helva, knowing what she must do, to think of the 732 as an impersonal "it," rather than the female the "brain" once was.

Kira swayed, making no reply.

For one paralyzing demisecond, Helva wondered if the girl had inadvertently opened the contact, if Kira were still in the thrall of the powerful deathwish. Had Helva's Dylan protest pierced Kira's self-destructive trance with its mockery? Had Helva succeeded in jolting her "brawn" to sanity? The release word would be no mortal use if she did not have her mobile "brawn's" cooperation to immobolize the rogue.

With slow steps Kira approached the bier and its ghastly occupant. The keening grew louder, the mumbling became articulated.

"He has been taken. He Who Orders has been taken," chanted the 732, and the crowd echoed the chant as readily as they had Helva's. "He is gone. Seber is gone."

Again, not again, helpless! Helva cried, her mind overwhelmed by her hopelessness.

Eerily another sound was superimposed over the 732's wail.

"Now that dwarf presents a definite problem, Lia," the wowing, muffled words could barely be distinguished. "I wouldn't be surprised . . . . "

It was a man's voice, Helva realized, played back at a lagging speed which distorted the words into a yawing parody. The ship was broadcasting, had broadcasted this tape so often until Seber's tapped voice was as decayed as his corpse.

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Kira continued to sway in her graceful circumnavigation.

"Speak, oh Seber, in singing tones that they servant, Kira, may hear the music of thy beloved voice," Kira crooned, making an obeisance to the column behind which lay the shell of the mad 732.

Helva managed with superhuman effort to suppress the cry of intolerable relief at the cues Kira was feeding her.

"CENCOM, THE RELEASE WORD!" Helva pleaded on the tight beam just as the 732's crooning broke off abruptly. Helva could almost feel the ship's held breath.

Delay! Delay! Where was Cencom!

"Lia, the interference on my contact is incredible. Can't you clear up the relays? That dwarf is wreaking havoc . . . "

Even Kira jumped involuntarily as Helva, deepening her voice to a baritone approximation of Seber's, adlibbed frantically.

"Can't seem to read you clearly. Lia? Lia? You got wires crossed?"

"Seber? Seber?" shrieked the rogue ship, her voice wild with incredulous hope. "I'm trapped. I'm trapped. I was thrown off course when the edge of the volcano blew. I tried to die."

Kira was fumbling with the draperies at the bulkhead. Her escorts, roused from their euphoria as they sensed sacrilege, dove towards Kira. Her swift hand caught one on the voice box in a deadly chop. She ducked under the other man, using her body to throw him against the bier so squarely that his head cracked ominously against the stone, and he slumped down.

"KH, the release is na-thom-te-ah-ro, watch the pitch!"

And Helva, knowing she was in effect executing one of her own kind, broadcast the release word into the 732. As the syllables with their pitched nuances

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activated the release of the access panel, Kira caught the plate, reached in deftly and threw the valve that would flood the inside of the shell with anaesthesia.

"I can't see you, Seber. Where are . . ." and the 732's despairing wail was stilled in longed-for death.

Kira whirled, the panel clinking behind the concealing draperies as cowled figures lurched into the main cabin from the quarters behind.

"Hold!" Helva commanded in Lia's voice. "He Who Orders has decided. Take the bare-faced woman back to the ship. Such blasphemous seed is not for the chosen of Alioth."

Kira, again trancelike, followed the dazed hoods back down the steps.

"Helva, what in hell's name is happening there?" Cencom demanded within the 834.

"He has decided," the fanatical mob in the plaza groaned and swayed in the thrall of the hallucinogenic fumes.

"Helva!" snapped Cencom.

"Oh shut up all of you," snapped Helva, schizoidically. "He has ordered. That is Eternal Truth."

She watched just long enough to be sure that the reeling, freak-drunk Aliothites would not interfere with Kira's return. How they could, Helva couldn't imagine, for they were dropping by the hundreds, exhausted by fumes and frenzy.

"I demand to know why you have deliberately abbrogated specific restrictions in your journey tape regarding Dylanistic . . . . "

"Demand be Dylanized," Helva cut them off angrily. "The end justifies the means, and might I remind you that for some reason unknown forever to God and man, your list of restricted planets did NOT include Alioth as by the fingernails of that God they should have!"

Cencom sputtered indignantly.

"Control yourself," Helva suggested acidly. "I found your long-lost rogue, and I have killed her. And I have touched on the release therapy for your precious Kira of Canopus. What more do you want of one "brain" shell? Huh?"

Cencom maintained silence for sixty stunned seconds.

"Where is Kira?"

Helva could swear Cencom sounded contrite. "She's all right," Helva muttered.

"Put her on."

"She's *all right!*" Helva repeated with weary emphasis. "She's on her way back from the Temple."

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The spaceport rocked under a multiple eruption north of the city just as the vehicle bearing Kira screeched to a halt at the lift. Helva unlocked the mechanism, and Kira lept on before the guards came to their senses. The ground danced under the ship's stabilizers, and as Kira dove from airlock to pilot's couch, Helva slammed the lock shut and precipitiously lifted from grim Alioth.

IX

In the tail scanners they saw the guards retreating to safety as the gantry tumbled leisurely down. Bright jewels dotted the receding planet as it gave them a volcanic sendoff.

"Scout Kira of the KH-834 reporting," the slender girl said crisply to Cencom, shedding the cloak. Helva half-expected a shower of hairpins to follow but Kira remained tautly erect before the tight beam. She gave a terse report, demanding to know why traders had not reported the presence of Service-type contact buttons plainly visible on every Aliothite. And why, which was a far more criminal omission, the hallucinogenic gas eruptions had not been reported.

"Hallucinogenic gas?" Cencom echoed weakly. Such instances were the nightmares of colonization, as entire populations could be subjected to illegal domination by such emissions, as indeed had happened on Alioth.

"I recommended strongly that all traders dealing with Alioth in the last fifty years be questioned as to their motives in suppressing such information from Central Worlds. And discover who was the semi-intelligent CW representative who cleared this freak-off planet for colonization."

Cencom was reduced to incoherent sputters.

"Stop gargling," Kira suggested sweetly, "and order an all-haste planet therapy team here. You've got an entire society to reorient to the business of living. We'll file a comprehensive report from Nekkar, but now I've got to inspect our children. That was a rough take-off. Over and out." And Kira closed the tight beam down.

With a fluid motion she propelled herself to the kitchen, shaking her braids free and massaging her scalp with rough fingers.

"My head is pounding!" she exclaimed, reaching for coffee. "That gas was unbelievably malodorous." She leaned wearily against the counter, her shoulders sagging in fatigue.

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Helva waited, knowing Kira was sorting her thoughts.

"The closer I got to that temple, the deeper the terrible miasma of grief. It was almost visible, Helva," she said and then added scathingly, "and I wallowed in it. Until that Dylan of yours reached me, Helva." Her eyes widened respectfully. "The hair on the back of my neck stood up straight. That final chord got me, right here," she groaned, jabbing at her abdomen with a graphic fist. "Thorn would have given strings from his guts to compose such a powerful Dylan." Her shoulders jerked in a violent muscle spasm. "That awful corpse!" She closed her eyes and shuddered, shaking her head sharply to rid herself of the effect. "I think . . . " she murmured, her eyes narrowing with self-appraisal, "I think I had done the same thing to Thorn."

"I think perhaps you had," Helva agreed softly.

Kira sipped at her coffee, her face tired but alive, the mask of vivacity replaced by an inner calm. "I have been so stupid," she said with trenchant self-contempt.

"Not even Cencom is infallible," Helva drawled.

Kira threw back her head in a whoop of laughter.

"That's Eternal Truth!" she crowed, dancing back into the main cabin.

Helva watched this victory dance, immeasurably pleased with the outcome of the affair as far as Kira was concerned. She could not regret that she had had to kill one of her own peers. The Lia had died years before with her scout: that tortured remnant had peace at last, and so had Kira. She and Helva would continue together on their stork run, picking up the seeds from . . . .

Helva let out a yip of exultation, utterly astonished at the solution that had risen from her subconscious. Kira stared at her, startled.

"What hit you?"

"It's so ridiculously simple I can't imagine someone never suggested it to you. Or maybe they did, and you rejected it."

"I'll never know unless you tell me what it is," Kira replied caustically.

"One of the facets of your grief psychosis . . . "

"I'm over it now," Kira interrupted Helva, eyes flashing angrily.

" . . . Ha to that. One of the facets has been the lack of progeny from your seed and Thorn's? Right?"

The scout's face turned stark-

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ly white, but Helva plunged on.

"Neither set of your parents was stupid enough to have ignored their RCA duty. Right? So their seed is on file. Take some of your mother's and his father's and . . . "

Kira's eyes widened, and her jaw dropped, her face lighting with incredible radiance. Tears streamed down her cheeks. Delicately she stretched out her hand, touching the access panel softly.

Helva was ridiculously, embarassingly delighted at her acceptance of the idea. Then Kira drew her breath in sharply, her face concerned.

"But for you . . . wouldn't you take *your* mother's and . . ."

"No," Helva said sharply, then added more gently, "that won't be necessary." She knew in mind and heart now that the resolution of grief is highly individual: that both she and Kira had reached it by different means, just as Theoda had.

Kira looked unaccountably stricken, as if she had no right to take the solution Helva offered if Helva did not, too.

"After all," the ship chuckled, "there aren't many women," and Helva used the word proudly, knowing that she had passed as surely from girlhood to woman's estate as any of her mobile sisters, "who give birth to 110,000 babies at one time."

Kira dissolved into laughter, crowing with delight over Helva's analogy. She snatched up her guitar, strumming a loud introductory arpeggio. Then the two, ship and scout, surprised the sparkling stars with a swinging Schubert serenade as they sped towards Nekkar and deliverance.

— ANNE McCAFFREY

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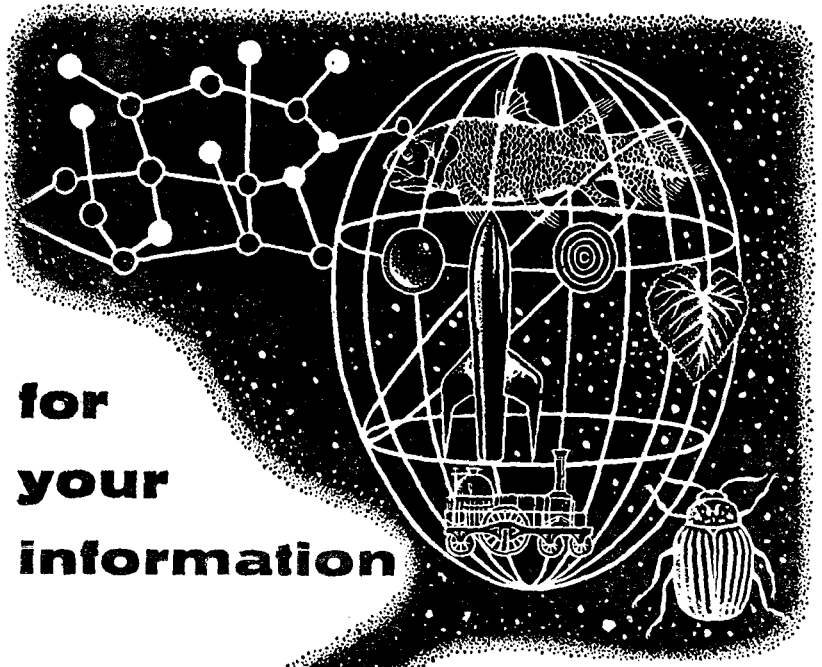

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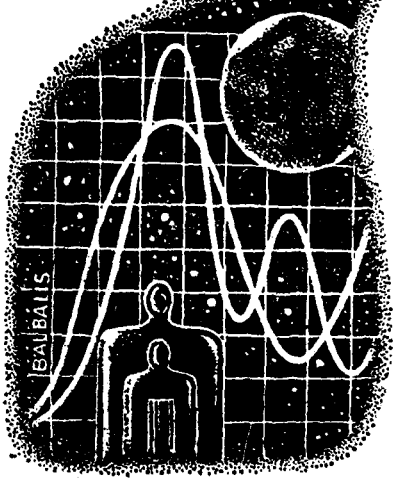

THE DELAYED DISCOVERY

If you have a bit of a radium compound and a sample of a beryllium compound in a glass tube something very interesting takes place, even though it cannot be seen directly. We now know that the disintegrating radium atoms disgorge alpha particles which, in turn, knock neu-

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trons out of the beryllium atoms. Such a radium-beryllium tube, therefore, becomes a source of neutrons.

The discovery that a mixture of radium and beryllium compounds emits a peculiar kind of "radiation" was made by several researchers in 1929 or 1930. They all noticed that the "radiation" was capable of pushing protons out of substances rich in hydrogen, such as paraffin. But at first they could not explain just what was going on. The one who did explain it — thereby becoming the discoverer of the neutron that had not been known to exist — was Sir James Chadwick in 1932.

Two years later Enrico Fermi and his co-workers in Italy began to use such radium-beryllium tubes to irradiate all kinds of elements with neutrons to see what would happen. When they got to uranium they observed peculiar effects that seemed to indicate the presence of radioactive atoms with an atomic weight higher than that of uranium, the heaviest element then known. The news that "trans-uranian" elements had been created, excited the "radioactive group", as they called themselves, the team of Otto Hahn, Lise Meitner and Fritz Strassmann at the Kaiser Wilhelm Institute for Chemistry in Berlin.

They, too, began to irradiate uranium and thorium with neutrons from radium-beryllium tubes; and they, too, obtained "trans-uranian" elements which they named eka-osmium, eka-iridium and eka-platinum. What all of them had really done was to split the uranium atom, but five years had to go by until they realized what had really happened.

Why the long delay.

Of course Otto Hahn, who finally did arrive at the truth, was the first to ask himself that question.* The simple answer is that the uranium and thorium atoms behaved in a manner that was not only completely unexpected but also somewhat incredible. The next question would be *why* this was an unexpected behavior, and the answer to that one is that the whole history of research had never given the faintest indication that anything like that might be in the future.

Of course the whole story begins with Dimitri Ivanovitch Mendeleyev in 1868. About 63 different chemical elements were known at the time, and Mende-

* I am well acquainted with Otto Hahn's thoughts because I have just finished translating his autobiography; it will be published by Charles Scribner's Sons in the Fall of 1966 under the title Otto Hahn, A Scientific Autobiography.

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37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43	44 Ru	45 Rh	46 Pd
55 Cs	56 Ba	RE	72	73 Ta	74 W	75	76 Os	77 Ir	78 Pt
87	88 Ra	89 Ac	90 Th	91	92 U	—	—	—	—

RARE EARTH ELEMENTS

La	Ce	Pr	Nd		Sm		Gd	Tb	Dy	Ho	Er	Tm	Yb	
57	58	59	60	61	62	63	64	65	66	67	68	69	70	71

Fig. 1. A portion of the Periodic Table as it would have looked in 1900 if the importance of the atomic number had been known then.

leyev wondered whether they could be classified in some manner, just as animals and plants had been classified. When Mendeleyev thought about the problem, he did not know that this had been tried twice before (by the Frenchman Alexander Emile Beguyer de Chancourtois in 1862 and by the Englishman John Alexander Newlands in 1864); nor did he know that the German Dr. Luther Meyer was engaged in the same task at the same time. Mendeleyev had two criteria in mind. One was the atomic weight, the other the number of valences of each element — that is, the number of *other* atoms an atom can hold.

Leaving out the lightest element, hydrogen, Mendeleyev began with lithium that can combine with *one* other atom. Beryllium came next. Its atom could combine with *two* other atoms. Then came boron that could combine with *three* other atoms and after that carbon that could combine with *four* others. Going along that way Mendeleyev found a series of 1 - 2 - 3 - 4 - 3 - 2 - 1 valences, and the next set of elements repeated this series, which is the reason why we still speak of a "periodic" table.

The periods after the first two sets of seven each were longer than seven links which did not worry him. What was worrisome was that the elements, when arranged in this manner, usually produced columns of elements with similar chemical character-

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TABLE I.

THE LANTHANIDES

Atomic number	Name	Symbol	Atomic Weight	Name of Discoverer and Year of Discovery
57	Lanthanum	La	138.92	Mosander, 1839
58	Cerium	Ce	140.13	Klaproth and Berzelius, 1803
59	Praseodymium	Pr	140.92	Auer von Welsbach, 1885
60	*Neodymium*	Nd	144.27	Auer von Welsbach, 1885
61	Promethium	Pm	145.	Marinsky and Glendenin, 1945
62	Samarium	Sm	150.35	de Boisbaudran, 1879
63	Europium	Eu	152.0	Demarcay, 1901
64	Gadolinium	Gd	157.26	Marignac, 1880
65	Terbium	Tb	158.93	Mosander, 1843
66	Dysprosium	Dy	162.51	de Boisbaudran, 1886
67	Holmium	Ho	164.94	Soret, 1878
68	Erbium	Er	167.27	Mosander, 1843
69	Thulium	Tm	168.94	Cleve, 1879
70	Ytterbium	Yb	173.04	Marignac, 1878
71	Lutetium	Lu	174.99	Urbain, 1907

istics. Usually, that is, but not all the time; and in 1871 Mendeleyev took the daring step of disregarding atomic weight in a few cases and of leaving gaps in his table.

These gaps, he declared, represented elements still to be discovered; they were next to the known elements aluminum, boron and silicon; and Mendeleyev, using the Greek root *eka* (in the meaning "to the side of"), labelled the empty spaces eka-aluminum, eka-boron and eka-silicon. They were discovered quite soon. In 1875 eka-aluminum became gallium, in 1879 eka-boron became scandium and in 1885 eka-silicon became germanium.

After such a success in prediction nobody could doubt that Mendeleyev's Periodic Table was valid. But while all doubts about the validity of the system were ruled out, that did not mean that there were no trouble spots. In some places things did not fit well, which probably meant undiscovered elements. Then there was a cluster of elements that were collectively known as the "rare earth elements" (now referred to as the *lanthanides* after their first

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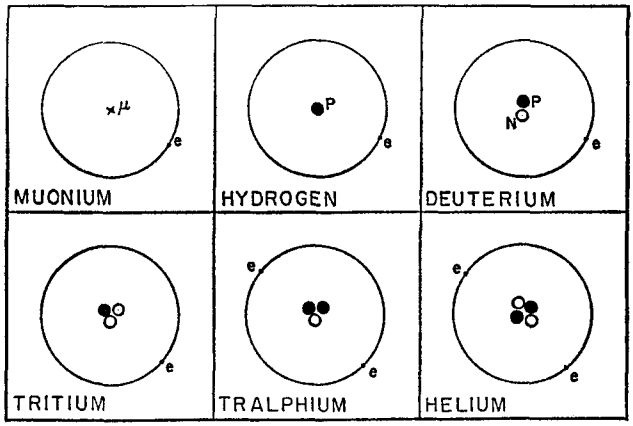

Fig. 2. The six lightest atoms, from the more than ephemeral muonium via hydrogen, double-weight hydrogen, triple-weight hydrogen, "light" helium to normal helium.

representative, see Table 1 as a memory refresher) which were very similar to each other chemically and which also upset a neat and orderly arrangement no matter how one tried to fit them in. Finally there was the problem of a few new elements in the area of the heavyweights. In 1898 Marie Sklodowska-Curie had found two new elements, polonium with an atomic weight of 210 and radium with an atomic weight of about 226.

While Mme. Curie is mainly known for the discovery of these two elements, she would be nearly as famous for other work, even if polonium and radium had been found by others. She proved that "Becquerel's rays" (discovered by Antoine Becquerel in 1896) were emitted by the uranium in the compounds he used and that thorium (discovered in 1828 by Jons Jacob Berzelius) also emitted radiation. Finally it was Mme. Curie, who coined the term "radioactivity".

The discoveries of the Curies prompted a large number of the new generation of scientists to go after radioactive substances. There was Bertram B. Boltwood (1870-1927) in America who discovered a new element called "ionium". There was Friedrich Ernst Dorn in Germany (1838-1916) who showed in 1900 that radium did not emit radiation only but also a gas that was entered into the

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Periodic Table as niton — it formed the bottom of the column of noble gases helium, neon, argon, krypton and xenon that had been discovered by Sir William Ramsay during the last half-decade of the nineteenth century. There was Sir William Ramsay himself (1852-1916); there was Ernest Rutherford (1871-1937), a native of New Zealand working in Canada and ending his life as Lord Rutherford of Nelson (after his birthplace). There was Hans Geiger (1882-1945), who worked with Rutherford and whose name is attached to the most important single instrument in atomic research, and there was Otto Hahn (born 1879), who worked with both Rutherford and Ramsay. There was, somewhat later, Niels Bohr (1885-1962) of Denmark and Enrico Fermi (1901-1954) of Italy.

There was, in addition to Ramsay, a large British contingent of which Frederick Soddy (1877-1956), Sir Joseph Thomson (1856-1940), Henry Gwyn-Jeffries Moseley (1887-1915) and Sir James Chadwick (born 1891) became the most famous.

Before we go on it will be useful to look at Fig. 1. It shows a section of the Periodic Table as it would have looked in 1900 if the table had then been drawn with the principles now known to be important.

Especially the bottom line is important. Four radioactive elements were known: radium, actinium, thorium and uranium. It was not quite clear then what their order should be, and it was suspected that there might be more.

Then Boltwood contributed his "ionium". Otto Hahn began his career by discovering what he called "radio-thorium". At a later date he added an element he called "meso-thorium," and a little later he had to realize that he was dealing with two elements that were logically called mesothorium-1 and mesothorium-2. Then he found one that he called uranium-X that proved to be quite a nuisance as far as experimentation wtih radioactive substances were concerned. In 1907 Otto Hahn acquired an assistant by the name of Lise Meitner, the daughter of a Jewish lawyer in Vienna who found that academic circles in Berlin discriminated against her — not because she was Jewish, but because she was a woman! Female scientists were not yet accepted, and the great Emil Fischer told Hahn that he could have her as an assistant only if she promised to stay in their own laboratory and never to betray her presence to the (male) students of the university. Together they discovered Protactinium.

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In the meantime still other "elements" had put in an appearance: there was actinium-B and actinium-X, there was thorium-B, thorium-X and thorium-C. Rutherford began to suspect that atomic transformations seemed to be going on right under the eyes of the investigators, and Boltwood began to talk of a decay chain which probably ran from uranium via ionium and possibly thorium to radium and from there to lead. Of course this violated the fundamental rule of chemistry that elements are (a) independent and (b) unchangeable. Chemists who went after their own discoveries in their own fields began to make jokes about modern alchemists who tried to transmute metals, and they were openly indignant when Hahn and others could not show them "samples" of mesothorium-2 or uranium-X. The fact that Hahn, in practically every publication, had to stress that he worked with quantities too small to be weighed shows how strange the new "radiochemistry" must have looked to "ordinary" chemists.

All quibbling aside, the multitude of radioactive elements posed a problem. Where did they fit into the Periodic Table?

Mendeleyev's table had proved its worth for the non-radioactive elements. Therefore the radioactives had to fit into it somewhere. But by 1912 nearly fifty such substances had been found. Even if you cut that number in half by assuming that many of them bore two different names because they had been discovered independently by different researchers and assuming further that a few mistakes had been made — even two dozen recently discovered radioactive elements just could not be accommodated by the table.

It was Frederick Soddy, in 1913, who found the answer. These radioactive elements all differed from each other as far as radiation was concerned. Some emitted one kind of rays and others another kind, and those that emitted the same kind differed in intensity. But many of them were alike in their *chemical* characteristics, and the Periodic Table dealt with *chemical* elements. Hence many of the radioactive elements belonged in the same place in the table. Greek for "same place" is *eisos topos;* the concept of isotopes had been born.

And just at about the same time Henry Gwyn-Jeffries Moseley — also a Rutherford pupil — almost single-handedly revolutionized the table itself. He demonstrated that all elements behaved properly under

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37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd
55 Cs	56 Ba	LA	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt
87 Fr	88 Ra	AC	104	105	106	107	108	—	—

THE LANTHANIDES

La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
57	58	59	60	61	62	63	64	65	66	67	68	69	70	71

THE ACTINIDES

Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	E	Fm	Mv	No	Lw
89	90	91	92	93	94	95	96	97	98	99	100	101	102	103

Fig. 3. Same portion of the Periodic Table as in Fig. 1. as it looks in 1966.

X-ray analysis if one sorted them by the number of electric charges in their nuclei. The number of charges—called "atomic number" — was the important thing; the atomic weight was secondary. Now the table acquired the form shown in Fig. 1. There could not possibly be an element between actinium (#89) and thorium (#90) since one cannot have half a charge; but there was room for an unknown element between thorium and uranium (#92). Element #91 was the protactinium of Hahn and Meitner.

The recognition of the existence of isotopes and the arrangement by atomic number had not only saved Mendeleyev's table against the onslaught of the radioactives, it had greatly improved it.

Now, knowing what to look for, one could think a little less gropingly about the structure of the atom. Rutherford had shown in the meantime that the "alpha particle" shot out by radium was actually the nucleus of a helium atom. It was also clear that the so-called beta rays were actually electrons. Rutherford, in a lecture to chemists who still looked at all this with a mixture of wonder and helplessness, made an interesting comparison. When an

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atom breaks down, he said, it is similar to firing a howitzer. The alpha particle is the shell; the smoke (still material but tenous by comparison) is represented by the electrons called beta rays; while the flash of light from the howitzer compares to the gamma rays which are true radiation and not particles.

Now the idea of how an atom was constructed was this: the helium atom has the atomic number 2 which means that two electrons orbit the nucleus. The nucleus then should consist of two positively charged protons. But the atomic weight of helium is 4, hence there have to be four protons in the nucleus. But since the nucleus only has two unit charges there must also be two electrons in that nucleus, neutralizing two of the four protons.

Of course one could raise all kinds of questions about this. But these seemed to be the observed facts, and the purpose of a theory is to explain the observed facts, not to doubt them.

In 1932, as has been told, Sir James Chadwick discovered experimental facts which could only be explained by assuming the existence of a sub-atomic particle that was as massive as a proton but lacked an electric charge, a neutral particle to be named neutron. And Werner Heisenberg in Germany said immediately and apparently with a sigh of relief, that this would eliminate the electrons in the nucleus. The alpha particle would simply consist of two protons and two neutrons which would explain both the charge and the mass. In the same year "heavy hydrogen" (with mass 2) was discovered, and interest shifted from the heaviest elements in the table to the lightest.

Fig. 2 shows how, according to our knowledge of today, the six lightest isotopes are built.

Ordinary helium has its two protons and two neutrons in the nucleus and is a stable element. But there is a helium isotope, called tralphium, with only one neutron in the nucleus. This is an unstable isotope, of mass 3. Hydrogen also has an isotope of mass 3, called tritium, with two neutrons and one proton. Like helium of mass 3 it is unstable, but hydrogen of mass 2 (deuterium) and ordinary hydrogen are stable.

Below ordinary hydrogen one more "element" has been added recently. Its nucleus consist of a "muon" (also called mu-meson), and "muonium" might be considered an isotope of hydrogen. But since a muon lasts only about 5 millionth of a second this is the shortest-lived of all the short-lived isotopes.

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All this was necessary as background for the answer to the question of why it took so long to recognize the fission of uranium for what it was. In 1917 Rutherford had succeeded for the first time in actually transmuting an element by bombarding nitrogen atoms. Some of the atoms were struck by alpha particles, losing protons from their nuclei in the process.

Assuming that the alpha particle itself was absorbed by the nucleus, the following had taken place:

$$_7N^{14} + {}_2He^4 \longrightarrow {}_8O^{17} + {}_1H^1$$

or, in words: a nitrogen nucleus of atomic number 7 and mass 14 had absorbed a helium nucleus (#2 of mass 4), forming an oxygen nucleus (#8 of mass 17) and a hydrogen nucleus.

This very first successful experiment showed what could happen. The addition of an alpha particle would raise the atomic number of the new nucleus by 2; the loss of an alpha particle would lower it by 2. Of course the new nucleus might be unstable and shoot out a proton (lowering the atomic number by 1) or else it might shoot out an electron (which means that one of the neutrons in the nucleus had changed into a proton) which would raise the atomic number by 1. In short, all the changes that were observed in the course of time, and there were very many of them, changed the atomic number by 1 or by 2, up or down in the table. If bombardment with alpha particles, and later with neutrons, had produced a new element, the researcher would look at the table in both directions for 1 or 2 numbers and then try chemical tests to see where the newly created isotope belonged.

It was all perfectly clear.

The new elements produced by the neutron bombardment of uranium therefore must have slid down two places, turning into isotopes of thorium, or, by continued decay, isotopes of radium. Or else they had moved up a place or two — three at the very most — and filled the spaces above #92; #93 would then be eka-rhenium, #94 eka-osmium and #95 eka-iridium.

Actually the uranium atom had broken into #56 barium and #36 krypton, forming several radioactive isotopes of each. Look at Fig. 1 again and you'll see that barium is located above radium, which means that they are chemically similar. Uranium fission produced radioactive isotopes with radium-barium characteristics; it was much easier to assume that the new radioactive

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TABLE II

THE ACTINIDES

Atomic number	Name	Symbol	Atomic Weight	Name of Discoverer and Year of Discovery	
89	Actinium	Ac	227	Debierne,	1899
90	Thorium	Th	232.05	Berzelius,	1828
91	Protactinium	Pa	231	Hahn and Meitner,	1917
92	Uranium	U	238.07	Klaproth,	1789
93	Neptunium	Np	237	McMillan and Abelson,	1940
94	Plutonium	Pu	242	Seaborg et al.,	1940
95	Americium	Am	243	Seaborg et al.,	1944
96	Curium	Cm	242	Seaborg et al.,	1944
97	Berkelium	Bk	249	Seaborg et al.,	1950
98	Californium	Cf	249	Seaborg et al.,	1950
99	Einsteinium	E	253	Ghiorso et al.,	1954
100	Fermium	Fm	255	Studier et al.,	1954
101	Mendelevium	Mv	256	Ghiorso et al.,	1955
102	Nobelium	No	253	Team at Berkeley,	1957
103	Lawrentium	Lw	257	Ghiorso et al.,	1961

isotopes were radium isotopes.

But Hahn and Strassmann became doubtful. In a report published early in 1939 they concluded with the words: "speaking as chemists we feel obliged to say that the new substances are not radium but barium." In another report, only a few months later, they definitely said that the new isotopes were barium, but still maintained that eka-rhenium, eka-osmium, etc. had been found. Actually they were isotopes of lanthanum and yttrium, which were not recognized because the chemical methods used were aimed at finding elements with characteristics similar to the platinum metals.

American researchers who had far better facilities and were already armed with the knowledge that uranium broke down into medium-heavy elements also had a difficult time. They had produced element #93 (neptunium) and #94 (plutonium), and according to the rules neptunium should be chemically similar to rhenium and plutonium to osmium.

They were not — and the

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problem was cleared up only after the second world war. Somebody might have guessed the truth, but I don't know who did it first. Element #89 (actinium) is located on the table below #57 (lanthanum), and lanthanum starts the strange series of the rare elements. Actinium, we know, starts a similar series; the elements from 89 to 103 (see Table II and Fig. 3) are now collectively called the *actinides*, and the tables resumed with the still undiscovered element #104.

As Fig. 3 shows, element #104 should be chemically similar to #72, hafnium, element #105 should be similar to #73, tantalum, and so forth. Of course it is not to be expected that any of the elements beyond the actinides will be stable. But it can he hoped that they will have isotopes that last long enough for an investigation of their chemical characteristics. And if #104 then turns out to be similar to #72 and #105 similar to #73, Mendeleyev's table will have passed its final test.

— WILLY LEY

FORECAST

Poul Anderson is an editor's delight — always reliable, always inventive, always great fun to read. Unfortunately for all of us, the rascal took a large part of last year off to wander around Europe, to the detriment of all our inventories.

With pleasure, though, we welcome him back in the next issue. The cover is from his story, which is entitled *Door to Anywhere* — and that's what it is: a door to any place in the universe . . . which unfortunately kills the people who pass through!

Hayden Howard brings us another Esk story, *The Modern Penitentiary*. Willy Ley's column deals with the sound of meteorites. There'll be a novelette by Larry Niven called *At the Bottom of a Hole* — a gravity hole, that is; namely the surface of a planet — plus Algis Budys's book reviews and whatever else we can squeeze into what still remains the most pages of any science-fiction magazine in the world . . . .

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Too Many Esks

by HAYDEN HOWARD

Illustrated by GAUGHAN

Dr. West's main purpose in life was to save the Earth from an invasion no one else suspected!

I

Winging above the opened harbor-ice, the immense flock of male sandpipers crowded down on the thawing tundra. With menacing squeaks, the fragile sandpipers hopped at each other. Flurrying wings, they battled for nesting territories close to the tiny pond.

Too many sandpipers? Dr. Joe West rested beside his heavy pack and tried to force his thoughts ahead to the Arctic harbor, where the ragged tents were crowding. A squeaking sandpiper fled past his boot. Dr. West's imagination recoiled from the harbor. He stared into the tiny pond, where wriggling swarms of mosquito larvae already were pupating.

Already there was a bloody

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whine behind Dr. West's ear. He slapped the back of his neck. "Dammit, I don't want to end up like a criminal."

Through the mosquitos, he focused his binoculars against the bleak natural harbor. "I don't want to be a martyr."

The distant growling of the tractor-truck trundling food cases out of the beached L.S.T. was punctuated by a gun shot. Probably some bearded amateur humanitarian shooting at a seagull! Dr. West glared through his binoculars at the flamboyant amateur lettering across the hull of the chartered landing ship. BOOTHIA PENINSULA OR BUST — NEW YORK SAVE THE ESKIMOS DAY COMMITTEE.

"No matter how many you feed there'll be more." Dr. West shook his head in a haze of mosquitos and refocused his binoculars at the tent-city rimming the harbor like dirty snow. With its explosive rate of growth, the tents would spread all the way inland to this pond before —

Dr. West blinked. His nervous system tingled from surfacing childhood guilt as he recognized through the binoculars, magnified and in compressed perspective beside a distant plywood cabin, the uniformed man, Mountie — Police Inspector — Canadian policeman — cop, cop, cop!

On the surface, Dr. West knew the problem was how to distribute the aerosol spray cans to the Esks without being traced. The depths of his problem were more disturbing.

He had landed his float plane on LaRue Lake, the long pond located an hour's hike inland across the boggy tundra. No secrecy there. Two seaplanes and an amphibian already were tied up like spiders as if their pilots expected wind. Evidently the lake was safer than the exposed harbor. A grinning Esk had peered out of a single tent, probably a guard for the planes. Many muddy boot prints converged on deeper tracks, a trail left by all the airborne whitemen who had hurried to inspect the multiplying Esks.

Through his binoculars, Dr. West studied the cop — the Mountie walking away from the plywood cabin and its tall radio mast. Striding past stacked supply crates, the Mountie went down the beach toward the bearded characters lolling in front of the L.S.T.

Liked a beached whale, the landing ship vomited the tractor-truck with another load of food cases. Up to the tents of the Esks, no one seemed to be

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guarding the supplies. Perhaps during the past winter the R. C. M. P. had discovered that the Esks were more obedient, less tempted to thievery even than Eskimos. Dr. West frowned.

Hordes of Esk children were romping around the boxes. Dr. West could not see any guards. He put away his binoculars.

Glancing at the vast Arctic sky, he hoisted his pack, heavy with the disguised containers of aerosol spray. He plodded straight into the village. Concealment was impossible anyway.

While the children scampered around him, Dr. West walked stiffly to meet the Mountie, who was striding up from the beach in a swarm of mosquitos.

"Sir, I recognize . . . you are Dr. Joseph West." The Mountie managed to seem glad to see him. "As you predicted, sir, we've a rapidly growing community." The Mountie had a warm handshake. "It is . . . it is an honor, sir, to meet you. Sir, I've always considered you as the . . . the discoverer of these — people. A pleasure to meet you. Why don't we continue on to my cabin. Your flight, walking from the lake, you must be tired and hungry, sir." He reached to relieve Dr. West of the weight of his pack.

"Thank you," Dr. West muttered with embarrassment, allowing the Mountie to take the surprisingly heavy pack.

For the moment, the Mountie was too courteous to ask if he had a Landing Permit. No doubt the politician, LaRue, had warned the R. C. M. P. to be on the lookout for Dr. West.

Inside the cabin, mosquitos hummed across plywood walls lined with books, stereo components and photosatellite maps of the Boothia Peninsula. Evidently the Mountie expected a permanent assignment here.

"Here's my Landing Permit." Dr. West handed it over with a belligerent smile. "Surprised?"

"No, sir. Headquarters radioed me to be expecting your aircraft." The Mountie acted like a solid type who would not expose his surprise, even if a little green man from Uranus four-lettered on his R. C. M. P. hat.

During tea and mosquitos, Dr. West opened his heavy pack. He lifted out a tape recorder, a strobe light with the largest size battery pack and a bulky battery-operated 16mm movie camera. Due to efficient forethought, all this equipment used the same size cylindrical interchangeable batteries. None of the equipment would work, because each battery enclosed and concealed an aerosol spray can.

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Dr. West glanced from the tape recorder to the Mountie's mildly interested expression. "I'm looking for Eevvaalik," Dr. West announced, and the Mountie's eyelids flickered.

It was Dr. West who had been surprised when his application for a Landing Permit finally was granted. The Esks had become a political football, and footballs bounce both ways. A year ago, Cultural Sanctuary guards would have kept Dr. West out, but —

In the Canadian Parliament, after listening to impassioned attacks by members of LaRue's party against the whole Cultural Sanctuary Commission concept and its incapability of caring for the exploding Esk population, the M.P.'s had refused to pass the annual appropriation for the Boothia Peninsula Eskimo Cultural Sanctuary.

When carry-over funds were exhausted, the Sanctuary Guards had to be withdrawn, and smiling politicians, *Life* photographers, amazed gynecologists and disturbed Family Allowance administrators had landed on LaRue Lake and plodded across the tundra to gawk at the Esks.

The Canadian government's Family Planning nurses already had reported that the Esks showed discouragingly negative attitudes toward customary birth control techniques.

When the rumor reached Ottawa that Family Planning nurses were injecting Esk women with a six-month ovulation-delay hormone and assuring the women it was a flu shot, there was more outraged oratory from old Etienne LaRue in Parliament. The nurses were withdrawn. Landing Permits were limited. Dr. West's application was not answered.

Ignored rather than specifically denied by some cautious clerk, Dr. West had suspected the bureaucrats still were holding their fingers up to test the winds of change.

Dr. West's past reputation in *population control* research for the U. S. Defense Department was enough for LaRue to demand he be kept out.

In Canada, from one side blew the dinosaur's breath of old Etienne LaRue, opposing any population limitation for the Esks or anyone else. Whether the Esks might vote for his party was unimportant, he said.

On the other side were increasingly disquieted bureaucrats and politicians responsible for the food, clothing and well-being of the rapidly increasing Esks. Unless something sensible

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were done, taxes would have to increase.

Eventually, addressed to Dr. West, a Landing Permit was issued with an illegible signature. Some bureaucrat hoped to remain anonymous.

"You're quite lucky, sir," the Mountie was saying, "to locate her. Eevvaalik was brought to this camp two weeks ago. Our doctor tells me she is quite ill, T.B."

The thought flashed through Dr. West's mind, when he fled from the Boothia Peninsula, he must take Eevvaalik with him. Kidnapping? Last winter, Eevvaalik refused to go. Now would she harshly scream and fight and cough? This might be his last chance. In California, he could get professional help in interrogating her. Depth hypnosis aided by pentathol injections might expose what Eevvaalik claimed she could not bear to remember. Unreasonably, sometimes she claimed all the Esks were her children. What had created the first Esk? Locked in her greasy head —

II

"This way, sir." As the Mountie led him through the aimless crowds of grinning Esks toward Eevvaalik's tent, Dr. West knew he ought to add kidnapping to his crimes. He was already suspected of it. The day before he took off from California, an inside page of the *San Francisco Chronicle* had carried excerpts from Etienne LaRue's latest speech in Montreal. As an addendum to florid attacks upon Canada's birth-control clinics, public schools, and parking problem, Etienne LaRue demanded to know why the government had not investigated the kidnapping last winter of an Eskimo, a certain Marthalik, now reported to be held against her will in California.

Marthalik had gone willingly with Dr. West to California. She was an Esk, not an Eskimo. The only one of her uncounted children Dr. West had brought with her might be his son. Not yet three years old, the smiling boy already managed understandable English. Terrifyingly, he was as large and agile and mature as a 12-year-old boy, or any other 3-year-old Esk.

"In this tent," the Mountie was saying. "Eevvaalik?"

The tents were Canadian Army surplus and looked it. Eevvaalik crouched in the dim corner beside her hollowed stone seal-oil lamp, empty. Dr. West unslung his heavy pack.

"Eh-eh," she laughed, immediately recognizing him. "It is The-Whiteman-Who-Was-Bit-

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ten-By-A-Dog." Coughing, she gasped: "Tell this person of her husband."

"Peterluk has much to eat. He has a warm place to sleep," Dr. West answered. "The Government would not let me go in to see him."

"A good place," Eevvaalik said hopefully. "This person wishes to be there also."

Silently, the Mountie left the tent. Mosquitos whined.

Dr. West smiled at Eevvaalik as he knelt beside her and felt her pulse. In a way he was sorry that her weakness had drained away her crusty independence. Probably she was the only real Eskimo in the camp.

"You would like it in Ottawa," he said, meaning California, beginning to think she would go with him to the plane with no trouble at all.

"Eh-eh," she laughed. "What is this warm prison called?"

"The New Ottawa Reformation Center. They say each person has his own igloo in the tower." Dr. West laid his hand on her brow, wishing he had brought a thermometer.

"Peterluk needs a woman," Eevvaalik laughed. "This person will be stronger soon." She slapped her bony chest. "This person can still do it with Peterluk the way he likes." She managed a feeble leer at Dr. West. "So you take this person to her husband."

"Soon-soon," Dr. West sighed, regretting he had not even brought a sleeping injection from his medical bag which now seemed so far away in the plane on LaRue Lake.

Ignoring the mosquitos, leather-skinned old Eevvaalik slept.

This tent seemed the only place where Dr. West could escape the thousand eyes. Swiftly, he opened the back of the tape recorder, took out the batteries. Prying off the top of a cylindrical battery, he removed a small, orange aerosol can labelled MOSQUITO SPRAY.

With his heavy-bladed hunting knife he dug hard-packed filth-clotted gravel from the floor of the tent. He refilled the battery with gravel. Jamming on the top, he fitted the battery back into the tape recorder. By the time he had operated on all the batteries in the tape recorder, in the battery pack for the strobe light and in the battery-powered camera, he had 16 aerosol cans labelled MOSQUITO SPRAY.

He was sweating with haste and fright as he removed the rigidity boards from the square pack, dovetailed the boards together and opened the little

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package of box nails. He hammered the box together using the butt of his hunting knife. The outside of the box was stamped: MOSQUITO SPRAY — NEW YORK SAVE THE ESKIMOS DAY COMMITTEE — 334, a non-existent but likely looking invoice number.

If he had planned all of this sooner, if he had made the terrible decision earlier, Dr. West thought, he might have planted this box in the freight car to Churchill on Hudson Bay or in the L.S.T. when it was being loaded. He might have avoided this risk. But here he was.

No excuse, even now, ahead of the Government's plan to resettle the Esks, he might have been able to place these terrible cans in the next food shipment and never come to the Boothia Peninsula. But here he was. "What makes me do these things?"

It was as dim outside as it would ever be. The crazy orange sun was looping down to the horizon and would rise without setting.

Dr. West withdrew his head into the tent. Leaving the photographic equipment on the gravel floor, he fitted the wooden box containing the aerosol cans into his pack. Their spray would not kill mosquitos.

When he tried to walk past hordes of playing children, they followed him. Like Eskimo children they didn't keep regular sleeping hours. Here it was midnight. They ran ahead of him toward a stack of unopened wooden crates stamped: DEHYDRATED FREEZE-DRIED 218.

Children swarmed ahead of him onto the crates, giggling. Little girls hummed and flapped their skinny arms.

My god, I can't really do it, Dr. West thought. *Let the Canadian government do it. They've got to, eventually.* But most Canadian economists insisted the country was underpopulated. He thought of China, India — still increasing.

More disillusioning, in the U.S. during 1968-70 when use of THE PILL was most widespread the birth-rate had started down. Then the Pentagon had become frantic because the future supply of scientists and soldiers was diminishing in comparison with unfriendly countries whose birth rates remained high.

U. S. economists became disturbed because production was geared to a population growth rate of about 3% per year, and this slump to a 1% population increase might be leading toward a recession. Increased

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space spending and accelerated pump priming were not taking up the slack. There would not be enough future consumers, unless, as one of the less inhibited tele-commentators put it: "The opinion media embark on a massive educational program of mother-priming."

Four children became the minimum family size in advertisements. Income tax deductions were raised to $1,000 for the first child, another $1,500 for the second, an additional $2,000 for the third and on up. Publicity was given to patriotically large families. New excise taxes increased the costs of birth-control pills. The population growth rate increased to more than 3%.

In defiance of a vast array of birth-control methods available in the richest country in the world, the U.S. population was now increasing at 4% per year. The 250 million population would double in 25 years.

This rate increase was tortoise-slow compared with the Esks.

"What got for us?" The roundly innocent face of an Esk boy peeked over the supply crates close to Dr. West, and the suddenly grinning boy opened his little hands; he was a clown.

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"Nothing. Everything." Dr. West answered.

Laughing, all the children began jabbering at once. Their modern Eskimo dialect seemed cruder, clumsier than Dr. West remembered from a year ago. With only other Esks as their models for growing up so quickly, would each generation be simpler, more crudely hewn than the last?

Dr. West asked if any of them could read. He pointed to the marks on the boxes. None of the children grasped what he meant. They didn't know about reading.

Dr. West thought they would not have time to learn. They would be adults and breeding by the time they were 5 years old. Could they learn to read? How long would they live? No one knew yet. Some of the first generations 5 years ago had shown a slight grasp of abstractions. Was this a declining ability? Those first Esks had two real Eskimos, Peterluk and Eevvaalik, as models. Now these children saw only other inexperienced Esks as their models for growing up. "Do you hunt walrus?" Dr. West asked. "Play at hunting walrus? Harpoon? Seal?"

"Wal-rus?" Already these 2-year-old and 3-year-old children, who looked like 12-year-olds, didn't know what walrus were. Due to the outspreading population pressure around this harbor where the supplies were landed, Esk children might not even see a seal. A little girl climbed onto Dr. West's lap. "Tell me of our grandfather in the sky."

"Once there was a great white bear who looked down from the stars," Dr. West began, but since he last was on the Boothia Peninsula the myth must have been crystallized in a new order, because the children giggled and began telling him the story.

"That star. That star." They were pointing, but in the sun-faded Arctic night the star was invisible to Dr. West.

"That star flying to this place closer all the time," the boy explained patiently. "That is how we began. Grandfather bear send part of himself ahead. He say be fruitful and multiply and prepare this place for me."

"What does fruitful mean?" Dr. West asked. "Multiply?"

"Don't know yet," the boy answered solemnly. "But — when we have covered the world, Grandfather bear will come. And once again all of us will become one. It will feel so good."

The children giggled and laughed and clapped their hands, echoing: "Will feel so good."

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III

Like children everywhere, their attention was shifting. They lost interest in Dr. West and ran away to play. Dr. West listened to their shrill voices in the distance, while he removed the wooden box of aerosol spray cans from his pack and left it among the bigger wooden crates. He walked away, his heart beating faster instead of slower.

What are you doing? Dr. West's young-old face twisted as if a spear was probing his heart. *I'm doing what has to be done now. What can't be done after the Esks have spread through the Canadian population.*

But do you know what you are doing? Dr. West blindly hurried away, thinking of Marthalik's gently smiling face across the breakfast table in California. Anxious to please him, she had repeated that she was glad not to be bothered with a baby: "I dream about many babies. Something — Grandfather Bear from the sky? Silly dream." Like the waxing moon her restlessness returned each month, and she cried out in her sleep; but to him she laughed with embarrassment: "Eh-eh, it feels strange not to have a baby every month. Feels strange not to accomplish anything."

At the start of the experiment, Dr. West had sat with his arms around her, both of them inhaling the bacterial endospores. In 24 hours Marthalik had run a temperature of 99 degrees; his temperature had been 100. For a few days she mentioned vague internal itchings. Then her obvious symptoms vanished. She had "recovered." But each childless month her restlessness returned more forcibly. Now in her dreams, which she would or could not describe, she shouted — in anger? At him?

Do you know what you are doing to these people psychologically? Dr. West pushed into Eevvaalik's tent and shoved his photographic equipment into his pack. *I can't even predict all their physical reactions to this pathogen.*

He winced at the thought of children playing with the orange cans.

Endospores of the bacteria were "sleeping" in these aerosol cans marked MOSQUITO SPRAY. It was true the bacteria had been repeatedly tested on chimps and humans while he was Director of Oriental Population Problems Research at the University of California. A mildly virulent strain, but bred to be resistant to the range of antibiotics available in certain nations, their infection tend-

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ed to cause a swelling of the Fallopian tubes.

In four to five years some of the original test women in California began having babies again, although timewise more widely spaced. Here was the potentiality for controlling the population growth of other nations, secretly, unilaterally.

The research had been funded by a Defense Department grant. By the time the young, contributing scientists discovered their first gray hairs, their enthusiasm had faded. Dr. West was particularly susceptible to guilt feelings. After he jockeyed into the Director's job, Dr. West diverted bacterial research to a characteristic not in the Pentagon's original specifications. It was a limiting, time-space characteristic which was a triumph of bacterial genetics. The bacteria were genetically altered until they exhibited consistently self-attenuating virulency.

Self-attenuating, like the ripples from a stone dropped into a pond, as the bacterial infection spread outward through the population its virulency would spread outward to nothing. It could not infect the world. From a single source, it could not even engulf a small country.

This had disappointed the Pentagon, as Dr. West bitterly recalled. The Defense Department reduced several of its financial grants to the University, a warning slash on the wrist. The University's lifeblood was government-financed research, so it became vital that Dr. Joseph West should resign as Director of Oriental Population Problems Research.

With a little "pencil-and-can-of-beans" research grant, Dr. West had returned to Arctic endocrinology. Camping with what he thought were Eskimos, he felt secretly relieved to be out as Director. Trying to act like an organization man had been raising hell with his blood pressure. But these Eskimos didn't act like the Eskimos he remembered from his previous trips to the Arctic. Slowly like a blind man, he clumsily "saw" that they were not. Then Marthalik, the girl he had been sleeping with, swelled up an gave birth within a month. A month?

When he had returned to California with Marthalik, the men in population research thought his report was a practical joke — until Marthalik gave birth at monthly intervals. Then he got professional cooperation. Marthalik was the only Esk on whom the population-limiting bacteria had been

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tested. A time-threat appeared. Dr. West had to act quickly, when he learned the Canadian Government was preparing to resettle the Esks throughout the North. From a scientific point of view he knew he had acted too quickly, insanely. One Esk was not a valid sample.

All members of a species will not react the same way to a new disease. In his mind, on a graph, a bell-shaped curve confronted him. Individual reactions tend to group along a bell-shaped curve. On the lip of the "bell" a few have surprisingly slight reactions to a disease. The great majority of people along the hump of the curve have the typical illness. A few down the other side of the bell-curve suffer violent reactions.

Dr. West's face tightened like a death mask. If the virulent side of the bell graph had a cut-off appearance with a population line rising straight up from maximum virulency, the researcher would be looking at an abstract line of corpses.

"God, forgive me!" Dr. West couldn't know *where* Marthalik's mild reaction would fit on a bell-shaped curve of the entire infected Esk population.

I tell you I had to act now before these people scattered. Dr. West wondered if he had spoken out loud.

"We will go now," Dr. West said quietly, and he knelt beside Eevvaalik and began to help her up.

"Eh-eh, this person stand by herself." Eevvaalik swayed while he supported her arm, and as she shuffled across the tent floor she was temporarily halted by a paroxysm of coughing, and then she continued on out into the garish Arctic day-night under her own power. "Eh-eh, big sky."

Her legs sagged, and Dr. West supported her while the mosquitos whined.

Dr. West knew he was going to need strong help to carry

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Eevvaalik all the way across the tundra to his plane. He hoped the Mountie was asleep. Quietly, Dr. West drafted four Esks. Unquestioningly they tried to obey him. Finally, two of the Esks understood — observed from him how to form a carrying-chair of their interlocked hands for Eevvaalik. The other two Esks wandered along behind. Dr. West was beginning to think he would get away with Eevvaalik.

The Mountie blundered toward them, his hair still rumpled with sleep, his eyes blinking in the weak midnight sunglow. Dr. West realized that an Esk must have been instructed to watch constantly, and the Esk had run to awaken the Mountie.

"Sir, if she is so ill," the Mountie mumbled, "you'd best take her to my cabin." He added apologetically: "Our doctor isn't here. Gone to Walrus Point Encampment two sleeps ago. Put her in my cabin. I'll send a boy for our doctor's reserve kit, if you want to give her something."

Dr. West started to speak and couldn't. It was now or never.

The Mountie blinked at the pair of Esks. "You, you, walk slow. Carry old woman to big cabin."

"Eh? Not old," Eevvaalik protested faintly as they carried her off and away from Dr. West.

"Sir, you'll want some tea." The Mountie's hand closed on Dr. West's arm and steered him toward the cabin.

It was as if the Mountie knew how Marthalik had been removed to California and didn't intend to let Dr. West fly off with Eevvaalik as well.

Dr. West felt suddenly old. As he walked, he resisted the urge to glance toward the stack of crates. Had the Esk spy witnessed him hiding the box of spray cans and thought to tell the Mountie of the little box the whiteman had left among the crates?

"You, you put her on the floor. Over there by stove," the Mountie was ordering the Esks as they went into the cabin. To Dr. West the Mountie smiled wanly. "I'm not afraid of a little T.B."

"Eevvaalik's was an arrested case of T.B.," Dr. West said. "What was the doctor — how was the doctor treating her?"

"Don't know, sir. I thought antibiotics cured that sort of thing nowadays, but — are the germs, sir, getting ahead of us? I'd thought she was better."

"Have you seen T.B. among the Esks?" It was a rhetorical question. Dr. West was nerving himself to walk defiantly out of the cabin and hike to his plane.

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"None, sir. Esks all seem sound as Canadian dollars," the Mountie laughed wearily. "Healthier than the rest of us."

"And multiplying a hell of a lot faster," Dr. West blurted, realizing he was going to stay and see it out to the end no matter what happened.

"One chap had a crate fall on his foot today, sir. Bloody mess. He's not complaining of much pain, but Esks don't," the Mountie's sleepy voice rambled on. "Bloody mess. Sir, since the doctor may not be back for days, I was hoping you'd have a look at this injured Esk. Not now, sir. After you've slept.

Dr. West knew the Mountie didn't intend for him to leave. He was the mouse. Was the Mountie the cat? He sat down on the corner bunk.

Swirling with 36 hours of exhaustion, Dr. West slept among the whirling mosquitos.

IV

When Dr. West awoke, there was an intermittent hissing noise within the cabin. He opened his eyes and watched the Mountie moving around in the cabin with one arm upraised, waving a little orange can. A masking odor of artificial pine trees drifted down upon Dr. West's face. Breathing quickly, Dr. West raised himself on one elbow.

The Mountie lowered the orange-colored aerosol spray can. "You've had a good sleep, sir. Canned bacon for breakfast, sir?"

Dr. West couldn't open his mouth to answer. His contracting stomach was about to crawl out of his mouth as he watched the Mountie using the Mosquito Spray.

"Any time *I* wake up," the Mountie's voice chatted on, "I call that meal my breakfast. I miss not having fried seal liver. This spray must be the slow-acting kind. Ah, see that mosquito! Still circling around like a Skua. Skua's a fierce gull. Nearest thing we have to a vulture. Sir, do you want your eggs sunny-side up? Those bearded chaps from New York may think themselves better than uniformed men, but the girl, skinny little thing — she's the cook in their landing ship, made me a present of these dozen eggs. A uniform always appeals to the women, sir. Never fails. Made me a present of this strawberry jam. How many pieces of bacon will you be having, sir?" He sprayed near the frying pan.

The overpowering odor of frying bacon whirled around as Dr. West blundered outside and

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threw up before an interested audience of young Esks. They were impressed by his dry heaves for a few moments. Then, giggling, a boy chased a girl through the crowd, spraying her face with the mist from an orange can. She was inhaling a fog of millions of bacterial spores.

When Dr. West went back into the bacon-reeking cabin, the mosquitos were whining unabated. The spray was harmless to mosquitos.

Eevvaalik was awake. Squatting in the corner, she was devouring Dr. West's unfinished breakfast.

"Here, sir, a good cup of tea will swish out the stomach, I always say." The Mountie cheerfully waved his hand at a mosquito. "When you feel fit, I hope you'll take a look at the Esk with the crushed foot." The mountie evidently intended to keep Dr. West as long as he could.

Dr. West knew the Mountie had been in communication with his superiors by radio. Were they belatedly checking out the "kidnapping" of Marthalik? That might necessitate telephone calls to authorities in California. Reputedly the R. C. M. P. were sticklers as to legal procedure, careful as to the rights of a suspect.

This Mountie might think Dr. West was attempting to make off with Eevvaalik, but proof to a judge would be difficult if Dr. West denied that intent. Temporary impasse —

After inspecting the crushed foot of the grinning Esk, Dr. West told the Mountie he wanted to walk to his plane to get his medical bag. Instead, the Mountie sent an Esk to get it.

In that irritating moment, Dr. West hoped this damned, smug Mountie would be susceptible to the endospores from the aerosol can. In males the infection sometimes produced uncomfort-

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able and embarrassing symptoms like prostatitus. In 24 hours he would know —

In 24 hours the Mountie appeared crestfallen. Presumably his latest radio conversation indicated the R. C. M. P. had not yet convinced a judge that a crime had been committed. No warrant had been issued. Dr. West felt like telling the Mountie to go to hell. He felt like walking off to his plane without looking back. He might get away with it.

"Sir, there's a woman having a bit of trouble giving birth." With so many Esks around all day, the Mountie produced one inescapable case after another for Dr. West.

"Serves her right for having one every month!"

"I know you don't mean that, sir. She's a mother."

"Of course she's a supermother."

"Sir?"

"She'll produce so many children that your children won't have room to sit down."

"I'm a bachelor, sir."

"You're a human being. You'll be one of an inundated species."

"Sir, are you talking about birth control? We were warn — Anyway it doesn't seem to do any good. The Family Planning nurses said the Esk women WANT to have more babies."

"And just what did the nurses do to prevent it?"

To this question the Mountie colored with embarrassment. "This and that, sir. Pills and all. When they found out what the pills were for, the Esk women threw the pills away."

"There are other female methods than pills."

"I'm a bachelor, sir. I — not instructed in the R. C. M. P."

"Like diaphragms?" Dr. West continued maliciously at this Victorian-Uniformed Mountie. "Diaphragms," Dr. West repeated. "I suppose those wouldn't be practical if the women resisted. And intrauterine devices, little curlycues of plastic or stainless steel. Even with cooperative women there is a 20% expulsion rate. Did the nurses try hormone injections on the Esk women? Technically, science is equipped to control births in any number of ways. Some hormone injections prevent ovulation for six months. Didn't they try injections?"

"Sir, now these Esk women won't even let the doctor hypo them for blood tests, or measles preventative shots, or —"

"You mean some fool told them what the birth control injections were for?"

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"Sir, you can't inject people against their will." The Mountie's face was sweating. "You can't just seize people and inject them from having babies. Our whole Canadian democratic system — " The Mountie sat down red-faced.

"Let me take your temperature," said Dr. West.

"I'm all right, sir. I'm never ill."

The Mountie's temperature was already 100, and there was no way to know how much higher it would rise.

"I'm all right, sir. Do you think an outsider has brought in the flu? Those bearded types in the L.S.T., they do a lot of coughing. I've eaten several meals with them. I'm never ill, sir, but I'm concerned about our Eskimos."

The Mountie peered out the door. "They used to be quite susceptible, sir. Back in 1968 we had severe influenza which started in Baffinland. We tried to quarantine. We watched it spread on he map . . ."

"I'll go out," Dr. West said, cautiously.

The Mountie opened his mouth as if to protest. Whether from concern that Dr. West also might be a flu carrier or that Dr. West might make an unauthorized departure, the Mountie did not say.

V

Dr. West observed some of the children were sitting rather than racing around. When he dipped his thermometer in the alcohol tube, women squeaked with fright and edged away. Apparently the women were afraid he was preparing to inject them with a new kind of no-baby needle. This was confirmed by the laughter of the men. Children were giggling.

After much instruction and demonstration to ensure they did not bite off the thermometer, Dr. West began taking the children's temperatures. Most of this small group were running temperatures of 99 to 100.

The Mountie appeared behind him, breathing hard and keeping away from the Esks. Mosquitos clustered on his blotchy face. "Sir, do you think — I think I shall order an immediate quarantine of this village."

From a distance, the Mountie told certain men to carry his words through the village, guards should be appointed and so forth.

While Esks might be more obedient than Eskimos, as the day dragged on Dr. West observed several groups departing. The guards protested, gestured, tried to explain. But Esks never

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use force. The Esks accepted life as cheerfully and non-combatively as if it were a dream soon to be ended. Soon guards and departees all were laughing. The guards waved goodbye. The departees trudged north along the coast toward one of the smaller camps. They had no sleds, no dogs. The Esks bred so much faster, that the dogs had become a rare minority, mainly eaten. Most of the accessible seals had been killed. The younger Esks wore only war-surplus khaki. When winter returned, Dr. West thought, there would be misery and death.

The miseries predicted for the world by Malthus: "the constant tendency of all animated life to increase beyond the nourishment prepared for it" would be demonstrated upon the Esks as if in a speeded-up movie of the next 100 years of the *human* population explosion. Soon.

Dr. West knew the Esk population would not achieve starvation-balance with its harsh Arctic environment because humanitarians would continue to send in food — to fuel new babies. The Esks would spread south.

"At the least, this epidemic will slow the birth-rate," Dr. West muttered in self-justification, "and give the Canadian government time to formulate a policy, before the Western Hemisphere is overrun." He realized he was talking to himself again and closed his mouth. Western Hemisphere overrun sounded — ridiculous.

At least this epidemic will demonstrate, for the first time on a large group, what planned population control can accomplish. "Quickly, cheaply, almost humanely — "

By the next day, Dr. West's confidence was shaken. Most of the Esks showed symptoms of the disease, but mild symptoms on the bell-shaped curve. Marthalik's must have been a severe case.

A few Esks showed temperatures of as much as 100. Unfortunately, Esks were more resistant than humans. Not only were they completely immune to T.B., they were only mildly affected by this population control disease.

It was the Mountie who was sick. His temperature had risen to 102 degrees.

Dr. West discovered the bearded humanitarians in the LST were running temperatures of over 101 to 103. The two *Life* photographers were confined to their tent. The bleary-eyed Mountie radioed for airborne medical help.

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Dr. West stared down at old Eevvaalik shivering in the blankets of what had been Dr. West's bed. Her temperature was approaching 105 degrees. He lost his nerve and began to cool her with damp rags. He forced aspirin between her dry lips. She whined at the bitter taste.

"Let this — person," she protested, " — find happiness. Do not . . . do things. No. Eh-eh." She laughed or coughed. "You not sick — don't know."

He tried to force another aspirin.

"Pah!" she spat it back. "You don't know."

Unexpectedly, she said: "You don't even know — this person is the mother of everybody. Eh-eh."

"Yes, I know that." Dr. West knelt beside her. He glanced at the tape recorder, but the batteries were filled with gravel. "I know you are the mother. Who is the father? What did he look like?"

"Terrible, this person feels terrible," Eevvaalik moaned. "This person, eh-eh, won't remember until you make her feel so good."

Even now, was she still teasing him, holding back her knowledge for some last advantage? Dr. West did not know.

Eevvaalik was prattling about her youth, when she was a young girl. "Eh-eh, in those days, few *Innuit* (Eskimos), many seals. This person asleep with full belly."

"Want to sleep," she cried out in sudden anguish, "Help me! Want to sleep."

By contrast, the Mountie kept getting out of bed. He staggered between the window and the radio closet, where his two-way radio equipment was housed. "Sir, until the medical plane gets here, and it never will, what with fog and carburetor difficulties and false promises, sir, we've got to do something for these people."

"They're not as sick as you are."

"Sir, the old woman looks like she's dying."

"Not likely," Dr. West answered with more confidence than he felt. "She — and you are the two with the highest temperatures."

"I'm responsible for all these people, sir. I should have kept this disease from spreading. The operator at Seal Camp says the fever has already reached there. Says some of my people arrived there yesterday. Why don't you do something, you're a doctor, or were a doctor." The Mountie staggered back to the radio closet without waiting for a reply.

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Dr. West bent over the fitfully sleeping Eevvaalik. He had started both Eevvaalik and the Mountie on a course of terramycin capsules, to keep down any secondary bacterial infections. Against the bacteria now spreading its poison through the narrow tube-structures of their bodies there was a specific anti-botic, but he did not have it. It would not have been available to him without a risky theft from one of the guarded laboratories in California. It was a classified military secret, as were the bacteria in the spray cans.

Dr. West smiled bitterly. For conspiring with others to "borrow" a starter sample of this population-control bacteria, for stealing a military secret, he was already liable to prosecution by the U. S. Government. If the spray cans and the bacteria were traced to him, and he was taken back to the U.S., — he remembered what happened to men who stole other military secrets —

"Now the radioman at Stone Bay says it's popped up there." The Mountie was clumsily charting the new locations of the illness on his wall map. "It's what we did during the flu epidemic," he muttered ineffectively. "The date of appearance and where the visitors came from. I keep telling them to cut off every camp from every other camp. Spreads and spreads."

VI

The next day the promised medical plane still had not even taken off. Engine distributor trouble was reported, and the Mountie blundered around the cabin, flopping down on the bed and sleeping fitfully.

By now, radio operators up and down the coast were comparing virulency of the disease in their respective encampments. The bacteria had spread south from one coastal camp to the next, until mild cases were reported in the fifth camp. Only a few mild cases in the fifth camp.

"Here, they had it worse, but they're getting better." The Mountie looked out the doorway. The Esks at their camp were becoming more active. The disease was running its course.

At Dr. West's suggestion, the flying boat was diverted to another camp. The Mountie seemed to want the flying boat here first, but he agreed, temporarily.

The next day as his fever declined, the Mountie put more detail into his chart — as if a map showing the spread of

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the disease magically could control the disease.

"I can't understand this," the Mountie said. "It seems to have stopped going south. In the fifth encampment, they say there are visitors from the fourth encampment but no one in the fifth encampment has it bad enough to matter. A few slight fevers. Do you think it's halted here?" He pressed his thick finger against the map.

"Yes." Dr. West winced; a clue was stalking him.

On each of the five encampments to the south, the map contained the Mountie's scrawled date for the reported arrival of visitors. "Everyone's done a terrible job of not keeping visitors out, sir. More inefficient than during the flu. So many more people now, but it's no excuse, sir."

In the village immediately south of them about 50% of the Esks reportedly had been sick — in the second village, 20% to 25%, in the third village, in the fourth village, 10% and in the fifth village there were only a few with a mild fever or other symptoms.

"As it went south, it died out," the Mountie murmured. "It's not like flu, is it, sir?"

"No, it isn't," Dr. West agreed.

Staring at the opposite extension of the disease on the map in a northerly direction, Dr. West began to have a trapped feeling. A clue as to the origin of the disease was beginning to take shape on the map.

"The two villages nearest to the north of us had it as bad as we did," the Mountie said, talking to himself. "Then it faded, weaker in each of the next five villages. So it took a total of seven villages to wear it out going north, but five going south." He turned and stared at Dr. West.

"In two north camps where they had it as bad as we did," the Mountie said, "their radio operators both report they noticed orange cans, mosquito spray cans like we've been using here."

Outside, there was the roar of the big medical flying boat circling the harbor for a landing.

The Mountie's face widened with relief, and he walked back into his radio closet and closed the door.

Dr. West knelt by Eevvaalik's sleeping form. As he lifted her wrist to feel her pulse, he knew *she was dead.*

When the Mountie came out of the radio closet, he stared at her, then at Dr. West's drawn face.

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"She's not the only one dead, sir. I didn't want to disturb you before the plane arrived, but about a dozen people are dead at the camp to the north of us. Mostly older people."

"The last of the real Eskimos," Dr. West blurted and felt sick, as if not just this Mountie, but the whole world, were closing in on him.

"I think so, sir. I think the disease was strongest where the spray cans were, sir. Here and in the two camps to the north where visitors carried mosquito spray cans. I've had men on the look out for cans in the other camps, but no sign of them. I know the disease is mildest in the camps furthest away from the cans. You're a doctor. How do you explain that, sir?"

"Probably a bacteria with self-attenuating virulency," Dr. West answered with calm desperation.

"I've never heard of that, sir."

"There's a lot you haven't heard of!" Then Dr. West managed to control his voice. "Think of microscopic blobs like strings of grapes, typical bacteria each excreting tissue-destroying poison as an incidental by-product, The toxin is what makes the person feel sick. Virulent bacteria, we say."

Dr. West stared out the open door to the harbor where the flying boat had landed; now the Mountie had reinforcements. "Where was I? Bacteria multiply so rapidly, a new generation every half hour, millions of bacteria within a person," Dr. West laughed unexpectedly. "There is the possibility of hundreds of bacterial mutations. Bacteria with slight genetic alterations. Here is the surprising thing. A single mutated bacterium may be "born" which excretes less poison and for some reason arouses less resistance in the body of the person. It and its descendants may be able to multiply more quickly through

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the next few bodies than the previous bacteria of its species. The mutated bacteria win the competition. Bacteria compete for living space, too. These less virulent but more fertile bacteria squeeze out their old-fashioned relatives and take over."

"From the poisonous ones, sir? Like the meek shall inherit the earth, Hardly that, sir?"

"In self-attenuating bacteria that is what has happened," Dr. West laughed as if in triumph. "The less poisonous had a built-in survival advantage. They've spread through the Esks with less and less symptoms, until they could infect the world — with no noticeable effect."

"The bacteria, sir?" The Mountie was staring at the map. "Surprising to me, sir. The opposite would be so much worse."

"You mean more and more virulent mutations. For some bacteria this does happen. It makes no difference to the bacteria as long as multiplication proceeds most rapidly." Dr. West watched the airmen walking up the beach toward him. His voice faded: "Like it or not, life's basic chemical command simply is to survive and multiply."

"It is true there will be too many Esks, sir." The Mountie was staring at him. "Is that what you're really thinking?"

"What do you think? This planet was yours first! They're only Esks."

"Perhaps, sir, but this is a civilized country." The Mountie's eyes scrutinized Dr. West. "Are you saying Esks are not fully human, sir? Saying things like that, Hitler soothed his Germans to pop off the Jews, by saying — other races . . . Are you saying Esks aren't human?"

Dr. West retorted: "30-day gestation period, and you still think Esks are human? Those stupid, bearded kooks in the L.S.T.," Dr. West gasped, "they are the humans. Stupidly feeding a new and competing species — Esks. Human? The Esks? No, *not* human unless monthly births from each Esk woman is a historically human characteristic. Mutated humans? Hell, no! In an Esk there are too damn many neat mutations at one time. They aren't human. You are the humanitarian idiots bringing food so the Esks can multiply until — "

"Sir, we can't let people starve! Listen, sir, those bearded chaps in the L.S.T., at least they obeyed the law and handed me approved invoices, lists of all the food they brought in. All imports approved. That is required by law. Look at these approved lists on my desk.

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Shipping number 334 is for 500 cartons of prefolded paper diapers. It is *not* for a little wooden box full of bloody cans of MOSQUITO SPRAY!"

Dr. West looked away as the Mountie's voice rose.

"The Esks brought the box to me." The Mountie's voice broke as if in pain. "I said, open it. How could I know? I said, just what I need, mosquito spray. I took a can. I said, you chaps take the rest. Sir, I even showed them how to press the knob on top to make the spray come out. Sir, I didn't — the bloody hell. What was in those cans? People died. People died." Mosquitos whined around the two men.

Dr. West's mouth was so dry he couldn't answer.

"People died, sir. People died." The Mountie looked down at the lump of bedcovers where Eevvaalik's body lay.

"But you didn't even get sick, sir," the Mountie blurted. "I think you brought those spray cans from California, sir. The R. C. M. P. will trace them back to where they were manufactured. You needn't speak without advice from your counselor-at-law. Sir —" The Mountie's voice trailed off, and he stared out the cabin door.

The words ARREST and MURDER remained unspoken. For days they had been flying through Dr. West's consciousness like savage-beaked Skuas. Now they fell at his feet. The worst had happened. There was nothing more he could do.

Dr. West's face twisted in a smile of numb relief as the cheery pilots and doctors from the flying boat blundered into the cabin and shook hands all around. The Mountie was too courteous to mention they were shaking hands with a murderer. They all sat down and had tea.

by HAYDEN HOWARD

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Galaxy Bookshelf

By Algis Budrys

This time we're talking about four books which not only proffer some sort of merit of their own but also make some representation about the condition and progress of science fiction as a form of literature. Accordingly, they're going to be reviewed not only as things in themselves but for their value as guides to those who may feel they don't know too much about the field and might consider purchasing them in an effort to learn something. Or, putting it another way, for their value as gifts to people whom you would like to introduce to the field.

World's Best Science Fiction: 1966, edited by Donald A. Wollheim and Terry Carr (Ace Books, is, apposite to Judith Merril's annual anthologies, the other respectable and apparently regular compilation of what its title claims to be. The previous or 1965 version in this series has even been certified by Miss Merril's crediting some of its contents for her own book — a breathtaking play — and in general was so well received that I regretted passing up the opportunity to put in my dissenting oar at the time.

There are fifteen selections in this current volume, and one is at once struck by the thought that it was a lean year in which only fourteen sf stories published in English everywhere in the world were better than Harlan

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Ellison's " 'Repent, Harlequin!' Said the Ticktockman", or, going on with the same sort of arithmetical negativism, Vernor Vinge's "Apartness" or Joseph Green's "The Decision Makers", Lin Carter's "Uncollected Works" or Christopher Anvil's "The Captive Djinn." You see where arithmetic leads us. An immediate third of the contents of this book is made up of stories which will not on inspection seem to be outstanding.

"Apartness", "Repent, Harlequin!" and "The Decision Makers" share the quality of being about solidly acceptable ideas; one, that segregation is bad, two, that regimentation is bad, three, that colonialism is fallacious, dangerous and bad. In 1936 when Leslie Charteris was scoring off the Establishment in the course of telling his Saint stories, this was daring stuff in commercial fiction. But even in 1936, it was necessary for potboiler-level crime drama to do more with the plot than provide an occasion for a philosophical point to be made. Now, I'm aware that there's a whole generation who thinks that this kind of rudimentary social consciousness is deep stuff, but if we are considering this book as something to show an outsider, chances are he will be a bit foozled that these primitive statements are considered enough to make an outstanding science-fiction story. More or less similarly, the Lin Carter story is distressingly slight, considering what H. G. Wells did with "Brownlow's Newspaper", and "The Captive Djinn" is a technical trickery thing about the clever Earthman who gets away from the stupid aliens who capture him. As you know, this piece usually depends on the aliens living with so improbable a technology that the sophisticated Earthman is bound to win at whatever word length the author desires. This particular example stacks the cards so openly, and so clumsily, that it makes a dubious choice for any anthology let alone one with these pretensions.

Good, solid science fiction is represented in this collection by Arthur C. Clarke's "Sunjammer", James H. Schmitz's "Planet of Forgetting" and "Masque of the Red Shift" by Fred Saberhagen. These are stories about real scientific problems, or at least possible real problems that could crop up in the future, and represent the kind of story which justifies the existence of science fiction as a distinct genre. Clifford D. Simak's "Over the River and Through the Woods" is a very good example of the kind of story no genre minds contain. Human and warm,

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founded on a genre concept — in this case, time travel—it is an altogether attractive story without being a particularly startling one. And Larry Niven's "Becalmed in Hell" and, even more so, David I. Masson's "Traveler's Rest" are what I think most people will recognize as uncommon science-fiction stories. In both of them the author has created a sense of actually having stood at the heart of his situation, looked it over thoroughly and then brought back to us an immediate sense of how it feels to, one, explore Venus, and, two, live in a world of time-distortion. The latter is particularly engrossing in this respect, and represents major talent.

Finally, Ron Goulart's "Calling Dr. Clockwork" and Fritz Leiber's "The Good New Days" are founded in our life and times as extended into the future, but intelligently so; the Goulart is even less of an obvious tilt at windmills than the Leiber. Either one of them is head and shoulders in sophistication over what happens when some bright young man sets out to prove that he too has something to say.

It's not a bad anthology, in other words, and contains some rewarding moments. Unlike the Merril, it does not draw some of its "best" selections from sources which are not normally directed to or supported by science-fiction readers. But it echoes the same taste, loading its contents far out of statistical conformity to the proportion of inept social protest actually published in the sf magazines. It doesn't and can't, therefore, be the "best" of science fiction. It can reflect what its editors think science fiction ought to be, or worse, it can be the false face they think will most ingratiate the field with strangers. This has always been a mistake, and I see no reason not to think it will be a mistake again.

Orbit 1 (Putnam) is a collection of original science-fiction stories, edited by Damon Knight and introduced with the words "Here are the nine best new science-fiction stories I could find in eight months of reading manuscripts." Knight, of course, is known to be one of the most knowledgeable editors and critics in this field, and any such statement must be followed by an exemplary compilation, or what's Heaven for?

And as a matter of fact, these are each in its own way attractive stories, each with its flash of ingenuity, each with its dash of charm, or Damon would not have liked it. In other words,

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the Berkley paperback edition will be well worth its price. The hardcover version meanwhile has its troubles with hardcover standards.

What I mean by that inflammatory remark is best inferred from the following additional quote: "All I had in my mind was to try to put together a collection of unpublished stories good enough to stand beside an anthology of classic science fiction." That is the standard this book does not quite attain, though the attempt is brave.

Three of these stories are froth: Allison Rice's "The Loolies Are Here," Sonya Dorman's "Splice of Life," and Thomas M. Disch's "Five Eggs." They are froth because in treatment or theme they are deliberately trivial; comments on, rather than illustrations of, housewife problems, hypochrondriac problems, and poetaster problems. They are well turned out; the Rice is a funny thing, "Splice of Life" is suitably unsettling, and "Five Eggs" does have that moment of charm etcetra mentioned above. But it seems odd to have it implied they are one-third of the best sf the editor saw in eight months. The jacket copy says one year.

Poul Anderson, James Blish, and Richard McKenna are each represented by exactly the kind of story for which his name is recognized and valued. Respectively, "The Disinherited", "How Beautiful with Banners" and "The Secret Place." McKenna's is about time travel, love and maturation. Blish's is about exobiology, sexuality and intelligence. Anderson's is about xenanthropology, politics and moral courage.

I found the Blish a little bewildering, as I sometimes do with Blish stories — the author seems to have a very clear idea of the scientific situation on which his plot revolves, and he is ruthlessly disciplined in telling a story which could occur only in that situation, but I think there are times when he does not let laymen in enough on how they would feel if this were happening to them, rather than to the educated protagonist. This may or may not be a quibble. I'm very much aware of the fact that historically this is *the* science fiction. And it's a very well written story, and carries something of an emotional charge. But I get the feeling that I'm reading it through a sheet of slightly tinted glass, and because it nevertheless conveys so much to me, I wish there were no barriers at all. I may of course be asking Blish to be a different author, in which case I withdraw the wish.

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In the case of McKenna, I think we have a minor story by a major writer, and in the case of Anderson, we have a kind of story which is so hard to write, I think, that only Anderson attempts it regularly. Only Anderson's successful attempts provide the reference that enables me to say this story of the man doing the necessary cruel thing, and being hated for it, is not as good as some others I've seen. Nevertheless, just as we had no one better than McKenna for writing about masculine love, and we have no one better than Blish for writing hard stories of physical science, we have no one better than Anderson for writing about intelligent motivations in the historical future. So to this extent, modified by these judgments on these individual examples, these three are representative of the best that science fiction can do in each of these three of the many kinds of science fiction.

Another common type of science fiction is the kind concerned with the places where we will live. One of the older conventional places is within an existing larger galactic empire to which we are newcomers, and in this type Kate Wilhelm's "Star-as Flonderans" is a pretty good example of thinking, in the sense that she has concerned herself with a very real possible problem. However, this is the kind of story in which all the characters are mouthpieces, discussing some inexplicable mystery of vital importance to them, while actually performing no actions. What action does occur is scene-setting by the author, who provides, at intervals, visible illustrations of that same mystery. Forward progress thus is zero. Finally the author pushes a couple of new characters and some additional scenery on stage; thus the actual nature of the problem is revealed, and what you suddenly realize is that the story that ought to have started there, and arisen from it, is thus lost. It was good thinking, nice thinking, but now another attempt will have to be made.

Keith Roberts's "The Deeps" is about people living beneath the sea, a fairly new—or at least newly rediscovered—locale. Roberts's treatment of it is extremely effective; the enchantment of 'the deeps,' the undercurrent of tension and fear that prolonged diving brings to those of us who attain maturity on land, our incredulous observation of the natural ease with which our children take to it and find entirely different fascinations in it, thus disquieting us more than if we ourselves found only revulsion—all these things are in this story.

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This brings us to the special case of Virginia Kidd, who, as this book tells us, was formerly married to James Blish and collaborated with him on many stories and novels published under his byline. In "Kangaroo Court", one does find many of the devices and approaches which are typical of a Blish story, as well as a quality of competence and self-trust which is accepted as a matter of course in work signed by an established name. In this unique context, it shows up as what we would call "daring" in a new writer. In other words, there is evident knowledge that there are things you should leave out as well as things you must put in.

"Kangaroo Court" is about marsupial aliens who return to Earth to check on the progress of a colony they planted on this planet millenia ago. By introducing the fact that the aliens travel by an experimental faster-than-light ship, and that relative to them the colony was planted only a few months ago, the author in one swoop accomplishes the introduction of a great many potent story-turns. The aliens must face the fact that the planet now belongs to autochthonous mammals. We in turn have to face the fact that all unbeknownst to us we have been containing and abrading a large chunk of an alien ecology and have in a sense participated in the final stages of its decay to sub-intelligent levels.

However, as in the Blish story, there is a sense of the last-act performers being conscious of a four-alarm fire backstage. There is also the immediate appearance of a villain whose villainy is pretty much unmotivated except in terms of cliche. He is a one-viewpoint man without past or future —a fetish dropped from the sky to worry the three-dimensional characters. Too, the narrative pacing is bad — there either needs to be more buildup toward the ending or, perhaps preferably, less detail beforehand, so that the need for a tacked-on trip to Australia does not arise. The actual story all takes place aboard the landed alien spaceship where marsupial and mammal sit in deliberation over the two viewpoints on the situation. Even so, this is very nearly a major story, by an undoubtedly important writer, representing a definite gain to the field.

What Damon Knight has put together here, then, is a book that represents science fiction well but not to any extraordinary extent. He has come up with some solid stories, some well written trifling stories, and one or two uncommon stories,

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though none that ring so well as to be clearly and obviously the "best" of anything.

The question then follows naturally: Am I perhaps asking too much when I suggest as strongly as I do that a "best" story proclaim itself outstanding not only in relation to its immediate company but in relation to all science-fiction writing? Well, on the face of it, I'm asking it to do more than its editors strictly promise. But whatever the right or wrong of this matter, there have clearly been stories and writers that have been responsible for the shape of this field, in the sense that they have uncovered for us new possibilities in the craft and new areas into which the general body of this field might advance. This sense of progression, this feeling that there is indeed a quality of intrinsic excellence which reveals itself without regard to relative merits, possesses many of us, I think. Sometimes in fits and starts, sometimes as a source of general compulsion toward a half-realized ideal. Being what it is, it frequently takes on the tones of intransigent frustration and makes us sound very grumpy indeed when we call for its evocation.

And thus we segue naturally into two books created by Sam Moskowitz.

These are *Seekers of Tomorrow* and *Modern Masterpieces of Science Fiction*, released simultaneously by World. *Seekers of Tomorrow* is a compilation of Moskowitz's short biographies of science-fiction writers. *Modern Masterpieces of Science Fiction* is an anthology of stories by those same writers. Taken together, they represent an item of scholarship and dedication, and a potential keystone for any understanding of the field on the part of someone lately come to it.

Moskowitz is a master of denotation. He will find a fact hidden from all other unaided eyes at a distance of a hundred yards, and he will write it down. In preparing these volumes for publication, he states that he reread "the entire science-fiction output of every science fiction writer discussed . . . As a prelude to writing this book, every science fiction magazine containing original material ever published in the English language was collected (as well as hundreds in foreign languages), and thousands of the key books, bulletins, newspaper clippings and related items were assembled. Quite literally, it took thirty years of reading and collecting to make the writing of this book possible." This from the introduction to *Seekers of Tomorrow*, which

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contains biographies of Edward E. Smith, John W. Campbell, Edmond Hamilton, Jack Williamson, Murray Leinster, John Wyndham, Eric Frank Russell, L. Sprague De Camp, Lester del Rey, Robert A. Heinlein, A. E. van Vogt, Theodore Sturgeon, Isaac Asimov, Clifford D. Simak, Fritz Leiber, C. L. Moore, Henry Kuttner, Robert Bloch, Ray Bradbury, Arthur C. Clark, Philip Jose Farmer and Mort Weisinger. (Mr. Weisinger's name was entered here out of order by the reviewer).

There is only one name here that one could really cavil with, though I think both Fred Pohl and Cyril Kornbluth might have had more extensive inclusion. The biographies are very interesting, and certainly contain a number of uncommon facts which tend to explain the individual creative approaches of these writers. There may be times when Moskowitz's approach, in his introductions, in the biographies and in his general treatment, infuriates you, as when he refers to John Campbell's "deluded" readers, or says that Jack Williamson "got more than he bargained for" after making a considerable effort to get into World War II. You must remember that Moskowitz is a master of denotation. He wouldn't know a connotation if it snapped at his ankle, which is something that happens quite often.

Moskowitz's personal approach leads to other easily visible attributes, some of which are a real pleasure to argue with, as when he says the T. S. Stribling's "The Green Splotches" is a story about an atomic-powered space rocket. Well, it isn't. It's a story about green splotches. But it is true that the fake Cesare Ruano was mining radium, though his spaceship seemed to react sharply to light-pressure, thus making it obviously the place where Arthur C. Clarke found the idea for "Sunjammer."

As you might gather, Moskowitz's approach to the history and evolution of this field is this "tune detective" approach. A diffusionist if there ever was one, he is concerned with tracing every story ever published to its origin in half a phrase thrown away in a story by Miles J. Breuer, which story itself of course is based on a paragraph in S. P. Meek. That anyone ever got an idea from some place other than a previous story found in an earlier issue in the Moskowitz complete collection is not allowed even as a theoretical talking point, and each such structure of investigation is based on assertion of impeccable research. Thus it is with glee that

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one discovers such boo-boos as the claim that Robert Heinlein wrote a story called "Delilah and the Spacemen's Rigger" or that Steven Vincent Benet is the author of something called "By the Place of the Gods." When he confuses Arthur C. Clarke's "Loophole" with another story, he is clearly making a mistake of his own, rather than being blamed for the very bad proofreading which abets the less frequent lapses in his nevertheless impressive memory.

Make no mistake about it—quibbling aside, Moskowitz knows, and transmits, at least as much about the history of science fiction and its evolution, as anyone possibly could. Though his bias is not the common bias and is therefore easily visible, his bias is probably no stronger than anyone else's would be. There is an incredible amount of love and patience embodied in these books. The idea of the two books as a device for telling us a great deal about the writers, the stories and the forces which add up to "modern" science fiction is a stunner. A few people might have gotten all of this together in their heads, but I cannot imagine anyone else who would have gotten it out on paper, and for that reason alone Moskowitz has fulfilled his function and his ambition, though not as flawlessly as he might like or might assert. Nevertheless he has done the humanly possible, which as you know is sometimes incredibly difficult to do.

The stories contained in *Modern Masterpieces of Science Fiction* are: "The Vortex Blasters", "Night", "A Logic Named Joe", "Requiem" (the good story of Edmond Hamilton), "With Folded Hands", "Adaptation", "The Witness", "The Command", "Kindness", "We Also Walk Dogs", "The Enchanted Village", "Liar!", "Microcosmic God", "Huddling Place", "Coming Attraction", "Doorway into Time", "We Guard the Black Planet!", "The Strange Flight of Richard Clayton", "Wake for the Living", "Before Eden" and "Mother", I think that with the exception of the Hamilton "Requiem" (as distinguished from Heinlein's good story of the same name), there are few stories here which need the author's byline conjoined with them to be immediately recognizable. They are not always the obvious stories—for example, one would not ordinarily mention "Metamorphosite" when speaking of Eric Frank Russell and then run "The Witness" instead — but on the other hand I'm very glad to see "A Logic Named Joe."

In addition, as you've gath-

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ered, Moskowitz includes much matter on stories and writers not given the full treatment. I think, everything taken in its place, provided you could not get hold of a copy of *Adventures in Time and Space* (in the first edition) you could do a lot worse in representing the field than to pass out a copy of *Modern Masterpieces of Science Fiction,* which despite the promise of the jacket does gain considerably by containing no contribution from the earnest Mr. Weisinger, whose biography in *Seekers of Tomorrow* will justify whatever evil one might care to think of him. Or haven't you read any Superman D.S. publications lately? I have. As for *Seekers of Tomorrow* taken as a whole, there is no other book like it. If you're at all interested in this field to the extent of wanting to know something about who writes it and why, you have got to have it. You have to have Moskowitz with it, but that's not as bad as it may sound. The field is full of opinionated people, or haven't you noticed? –ALGIS BUDRYS

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PLANET of FAKERS

by J. T. McINTOSH

Illustrated by McCLANE

They didn't wear clothes because they didn't dare — and for the same reason they could never hope to return home!

I

"Next, please," Stevens called, and the guard at the door opened it.

The small, tubby man who entered was frightened out of his wits. He was also naked. But then, so was Stevens, so were the two guards, so were Evans and Anna and Jonina. He wasn't the odd man out.

"Hammett, isn't it?" said Stevens, picking up his stethoscope.

"Yes, sir." Even Hammett's eyebrows were shivering.

"Don't worry," Stevens said

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mildly. "If you're okay, you've nothing to worry about. If you're a Faker — "

"I'm *me,* sir," said Hammett earnestly. Jonina came to draw a blood sample from his arm, and at one and the same time he tried to look at her and not look at her. Some of the older people, even after a month of total nudity all the time everywhere, still hadn't gotten used to it and never would.

"Well, that's what we're going to find out," said Stevens.

"You don't use pincers now, do you?" Hammett asked apprehensively.

"No, that doesn't work any more."

"And no . . . survival tests, like holding a guy's head under water?"

"They don't work any more either."

"And no . . . " involuntarily he glanced at Jonina, who was withdrawing the needle, and instantly looked away as embarrassed as if he'd been caught looking through a keyhole " . . . no . . . sex?"

"That worked for only two days," Stevens sighed.

Hammett looked slightly relieved, but only slightly.

It was no use listening to the little man's heart, really, for if he was a Faker he could make it race exactly as it was doing. All the same, as a doctor, Stevens liked to form an impression from a long list of symptoms — and the fact that Hammett's heart sounded as it did went with the fact that Hammett reacted as he did when Jonina bent over him to make it a little less likely that he was a Faker. The blood tests weren't much use either, yet if the Fakers had got Hammett in the last hour or two, the blood sediment rate would be significant. They could take over the body and the brain instantly, but the blood had a will of its own.

The detection team tried dozens of brief tests on Hammett, shot questions at him and examined his brainwaves — in short, they ran a random sample of tests which had caught Fakers out in the past.

They were fully aware, however, that the most useless thing they could do was use tests which had previously caught Fakers out . . .

Evans, who had been working at the other end of the clinic on a set of answers from Hammett, suddenly thought of something and waddled back to the group. Evans, the oldest of the tec team, was pale and paunchy and not enthusiastic about Operation Birthday Suit. If, like Stevens and the two girls, you were young and slim and well-formed,

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you still might not like it — but you had less reason positively to dislike it, Evans considered.

"Thought of something, Tom?" Stevens said hopefully.

Evans nodded and asked Hammett: "Who was Black Beauty?"

"Black Beauty?" Hammett echoed blankly.

The two girls, both working on samples, stopped and turned to look at Hammett, who had gone pale and looked, if anything, even more frightened.

"Good question, Tom," Stevens commented. "Well, Hammett?"

The little man licked his lips. "The Mona Lisa?" he said. "Some dame in a poem? A play?"

The atmosphere in the clinic changed.

"Just wait in there, Hammett, will you?" Stevens said, pointing to one of the soundproof cells which had been constructed out of the former changing cubicles.

Hammett went so pale that scars unsuspected before, showed on his face. "For Pete's sake, Doctor," he begged, "don't do anything rash. I'm *me,* I tell you — "

"We'll find out," Stevens said evenly.

One of the guards pushed the little man into a cell and made sure the door was properly shut.

"Funny," Jonina said. "Nothing medical or scientific works. This blood is just ordinary human blood. Yet a simple little question like that works — "

"I don't really think he's a Faker," Stevens said.

"Neither do I," said Anna.

Anna was small and dark, Jonina tall and blonde. Jonina was a nurse, and Anna a physicist. Jonina looked twenty-one and was in fact eighteen. Anna looked eighteen and was actually twenty-four. She was unofficially engaged to Stevens.

"I'm not so sure," said Jonina thoughtfully. "When I was standing over him just now and he made like a shy middle-aged adolescent, I got the idea it must be an act. Seemed a bit overdone . . . I guess it might be worth having him back and trying the temptress routine. I'm game, though he's rather a repulsive little man . . . Anna?"

Anna shrugged.

"Nothing that stops working ever works again," Stevens said. "But we've nothing to lose." He nodded to the guards, and they brought Hammett back.

"Doctor," he croaked. "I'm not much of a reader, see, not an educated man . . . Whoever Black Beauty is, I guess you know all about her, but not everybody knows as much as you. I mean,

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it could be a dame or coal or a black diamond or . . . "

He stopped as Jonina put her arms round him.

The team, and most of the victims, had elected to treat this sort of thing as comedy. Of course, it ceased to be funny when Fakers were caught this way. But the rest of the time . . . well, anything went if you could treat it as pure farce.

Anna joined in, and they made smoke blow out of the little man's ears. But he didn't think it was fun. He was sick with embarrassment. It was a moment of exquisite relief for him when he was allowed to go back to his cell.

"Well?" said Stevens.

"Yes," said Jonina.

"No," said Anna, at the same time.

Then they started to argue. No man could really be that way, Jonina said. He was exaggerating. Anna said Jonina was just a kid and when she was a little older and had a little more experience with men, she'd know they could be *any* way. Jonina said well maybe Anna would know about that, but when *she* necked with a man, any man, she expected a lot more genuine uninhibited male reaction. Anna, refusing to be drawn, asked coolly how often Jonina necked with little fat men old enough to be her father and how often she thought Hammett in the last fifteen years had had two naked girls trying to seduce him.

"Break it up, girls," Stevens sighed. "Let's leave him there for a while and finish this batch." To the guard at the door he said: "Next, please."

A skinny youth entered. "Who is Black Beauty?" Stevens shot at him.

The youth blinked. "A horse in a kids' story. A horse that — "

"Okay. You can go."

Surprised, because these tests could take hours, the youth went out.

The other three were surprised too. "Taking a chance, aren't you?" said Evans. "We don't know that the Fakers don't know about Black Beauty. They could easily — "

"I want to try that question on as many people as possible before the Fakers find the answer. In half an hour it'll be useless. If Hammett is a Faker, they already know the question, and in two minutes they'll have the answer. Even if he isn't, the news will be all over the colony that we're asking about Black Beauty — "

"We could tell everybody not to breathe a word of it," said Jonina.

Stevens smiled wryly. "That would be as good as a broadcast.

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Next, please," he said quietly.

II

The guard opened the door again. A girl came in, a small girl rather like Anna.

"Sonia?" said Stevens. He couldn't remember her surname.

"That's right." She was not nervous. She smiled at Jonina and Anna, who did not smile back.

Again Stevens decided in the first seconds that he was not dealing with a Faker. Sonia was enjoying herself, enjoying being the center of attention. She had a moderately pretty face that would not, a month ago, have attracted much notice in the domed city. But she had the figure for Operation Birthday Suit . . .

"Just one question, Sonia," said Stevens, and asked it.

The girl grinned. "If I weren't so modest, I'd say it could be me," she observed.

"Now the right answer," said Stevens patiently.

"Well I'll be polite and say Anna here."

"Quit stalling."

"Black Beauty?"

Stevens nodded to the guard.

Sonia not only protested, she tried to fight. Anna, who didn't like her and made no secret about it, chopped her hard on the back of the neck, and after that she was bundled into a second cell with no trouble.

"But she's not a Faker," Anna said when the door was closed. "She's a louse, but not a Faker."

"Don't kids read about Black Beauty any more?" Stevens said, frowning. "Is it a dud question?"

"No," said Evans, Anna and Jonina, more or less together.

"Next, please," said Stevens.

The youth who entered was rather between Hammett and Sonia in attitude. He was nervous, and yet he was excited too. This regular examination was the biggest thing in the lives of the 316 Procarpan colonists at the moment. It was, quite literally, a matter of life and death. They feared it and felt a mighty relief when it was over once again. But it also, in a macabre way, gave some of the colonists a terrific kick to pass the test, to prove they were human.

Right away Stevens said: "Who is Black Beauty?"

"A horse," said the youth. "A horse that drew a London cab, and — "

"Okay," said Stevens. "You can go."

After he had gone, the other three looked at him in doubt. Relying on a single question was a big gamble.

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Answering their unspoken question, Stevens said: "He's a technician. He has skills that can't be picked up in a few weeks. If he were a Faker, he'd be found out in a couple of hours."

Evans still looked doubtful. "We can't afford to cut corners, Steve."

"We can't afford not to. We've got three hundred ten to keep testing. We haven't caught a Faker in a week — and if the past record is anything to go by, there must be about half a dozen new Fakers in that time, not counting any we might have missed before. I guess we may have to skip the people we know aren't Fakers, like us six and the Director and the technicians and engineers, and concentrate for a while on the unskilled . . . Right, next, guard."

"That's the lot," said the guard.

"We'll have Hammett back, then."

It had seemed, when Hammett first came in, that he couldn't possibly be more scared. But that had been proved wrong. Fright had become fear, then terror, and now absolute desperation.

"All right," said Stevens, "you can go."

Hammett scuttled out before he could change his mind.

"Why the heck did you let him go?" Jonina demanded. She was ruffled — she was the one who had said he might well be a Faker.

"They don't know human terror," Stevens said. "If he were a Faker, he couldn't act like that because he wouldn't know how. Fakers have experienced a lot of things here, but not — "

"You're wrong, Steve," said Evans quietly. "What about the people taken over by Fakers?" Could there be greater fear?"

Jonina shuddered, but Stevens was unimpressed. "It's quick. Usually they don't even see the white worm. If they do, they either manage to kill it or they run. If they run, they're either caught in a second or they escape. What the Fakers see is not suspense terror, but escape terror. Hammett didn't look the way a man would look when trapped by a worm."

Evans nodded slowly.

Sonia was brought out. She was still annoyed, but confident now. "You might have given me a chance," she protested. "Black Beauty — sure, a horse. A horse in kids' books."

Stevens made a gesture, Anna screamed, the nearest guard brought up his gun and fired. Sonia collapsed like an empty sack, dead before she started to fall.

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"Well, well," said Evans in a hushed tone. "I hope you knew what you were doing, Steve."

"She wasn't a Faker, Arthur," Anna whispered. She was the only person in the colony who called Stevens Arthur. Everybody else called him Steve, except when linking him with Evans. Then they were Stevens and Evans.

"Let's just wait, huh?" said Stevens, curt with her for once.

They all stared down at the body on the floor. The gun the guard had used killed instantly but without any visible injury. Apart from her crumpled position, the girl on the floor might merely have been asleep.

They scarcely moved for ten minutes. They were all, including the two guards, remembering that three of the people destroyed as Fakers had not been Fakers at all . . .

At last, to the immense relief of all of them, the faint green tinge that proved she was a Faker began to appear under the girl's skin.

"Give that to the lab boys," Stevens said, indicating the corpse. The guards carried it out.

"Well, you spotted her — but how?" said Evans.

"When she went into the cubicle, she just didn't know who Black Beauty was. Some things you forget temporarily, like a name or an address — but if you know Black Beauty was a horse, you don't forget that. If you do, you don't suddenly remember it."

"So what happened?"

Stevens face went grim. "A Faker among us went to the library. Or found out from somebody in the colony. I'm going to see the Director about that now."

III

The Director was working on a chess problem when Stevens walked in on him. Like everyone else he was stark naked, even in his private room.

"Well, Steve?" the Director asked.

"Caught one," Stevens said.

"Good. About time," said the Director pleasantly. "Who have we lost?"

"Girl called Sonia. I don't remember her other name."

"I know her. Small, dark. Poor kid. Did you send the corpse to the labs?"

"Of course."

"Good. One of these days they'll turn up something. They're asking for a live Faker, by the way."

Stevens pursed his lips. "When we find Fakers, we don't dare do anything but blast them.

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That way we kill any extra worms they're carrying. Besides, their strength — "

"I know, I know. You could strap suspects in chairs before starting the tests, couldn't you?"

"That wouldn't stop the worms coming out if they saw a chance. Director, there's something I want done right away." He explained the Black Beauty test and added: "I've been to the library. There isn't a copy of the book, and I couldn't find a mention in any of the encyclopedias, except under Sewell — and that would be no use to anyone who didn't know where to look in the first place."

"So?"

"So some Faker among us asked somebody."

"And you want to spot the Faker. Right." He turned to the intercom and gave orders. An immediate exhaustive check was to be made. Who had asked whom about Black Beauty? The orders made it clear, in case anyone thought he might be buying trouble, that nobody was interested in the person who had *answered* the question — only in the person who had *asked*.

When he had finished giving the orders, the Director turned back to Stevens. "Any ideas about their method of communication yet?" he asked. "The lab boys swear it isn't telepathy."

Stevens shook his head. "All any of us can guess is that it's an extra sense we can't conceive . . . suppose a certain race had never had hearing, they'd wonder how we could communicate. They'd notice we moved our lips and work on the possibility that we were using a kind of sign language. But then they'd find that we didn't have to look at a person's lips to get the message — "

"What kind of sense would work in a soundproof, lightproof, radiationproof room? The lab boys insist no telepathic waves could get through that shielding."

Stevens shrugged. "We know it happens. Anything any Faker knows, learns, can do, every other Faker instantly knows, has learned, can do. That's why it gets harder and harder to spot them . . . Director, can't we drop Operation Birthday Suit? It isn't helping any more, and in some ways it's hindering — "

"How?"

"Well, though the young people soon get used to it, the older folks don't. They tend to seek privacy. They stay alone as much as possible. And that's just playing into the Faker's hands. Besides, nakedness means every inch of all of us is vulnerable all the time, and a worm merely has to get close enough to

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strike — through the ground straight into bare feet maybe—"

"Clothes never gave any protection. They don't need bare skin. They can strike through anything."

"Okay, forget that point if you like."

The Director thought for a moment and then shook his head. "No," he said. "We can't drop it. We know that the Fakers used to carry spare worms under their clothes, on their skin, in their pockets. Now worms have to emerge from the body, and that takes time. Maybe not much time, but still time. Another thing is, you know a Faker who has just taken over doesn't move quite right, the muscles jump, there's a flush — we've spotted seven that way, remember."

"But only one in the last three weeks," Stevens argued. "I think they've beaten that too — "

"How?"

"Well, obviously when a worm strikes and flows into a human body, there must be conflict for a time — minutes if not hours. Although the brain seems to be blotted out instantly, the body fights on longer. The blood fights longest of all — we calculate that seven hours after substitution, the BSR is still significantly high. But the Fakers have long since found how to keep this conflict masked. They stop the flush, force the muscles to relax, and any internal fight that's going on proceeds without visible sign."

The Director nodded slowly. "Maybe, maybe. But we stay in the buff. You won't shift me, Steve. In overalls a single Faker could carry enough worms to take over a whole dormitory before the guards could do a thing. Naked, on your own estimate, Fakers can't carry more than two or three spare worms."

Stevens nodded grudgingly. "Another thing, then — don't you think the library should be closed? Sure, it's shutting the stable door after the horse has bolted, but take the present case . . . If we ask a question that catches Fakers, all the others have to do is go to the library and find the answer."

"There are three girls checking everybody who uses the library and when, Steve."

"Sure, but we've never yet caught a Faker that way. At the same time, the availability of the library means — "

"No, Steve," said the Director definitely. "The library has to remain open for about half our personnel anyway — you, your staff, the scientists, the recorders. I can't see that closing it to the others, which would be very diffi-

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cult administratively, would make much difference."

Stevens nodded even more grudgingly. "I have to get back," he said. "There's another batch lined up by this time."

"Goes on all the time, doesn't it? Steve, any suggestions you've got, I'll listen."

What in hell's the good of listening and then saying no? Stevens thought but didn't say. Not for the first time, another thought formed in his mind: The Director always had perfectly good reasons for doing the wrong thing, but with some other man in charge of the Procarpan dome colony, the Faker problem might well have been beaten long since.

Stevens made one more try: "Well, why can't we make one big room somehow and all live in it? That way the Fakers could never get at anybody on their own — "

The Director was shaking his head again. "Our materials are cruelly limited. We have nothing but what we landed with. Steve, what nobody is ever going to understand when we get back — if we get back — is that in this colony there's just no way of stopping Faker worms getting at people. Crowding everybody together would merely help them to take over scores of people quickly, silently, instead of the odd one now and then. We can't send people round in twos or threes or fours, because if half of them are Fakers, we're simply sentencing the other half. The only weapon that really works is the guns, and the best use we can make of them is to give them to guards who patrol the whole area, search for worms and take note when two people come too close . . ."

He stopped and added rather irritably: "Surely your job is more vital than anything I can do? If you could only find a simple, quick, infallible test that would show whether any man or woman was possessed or not — "

"Quite," Stevens retorted. "If only you hadn't been in such a hurry to teach the Fakers everything we know, it would have been easy. As it is, it's getting close to impossible."

Giving the Director no opportunity to answer, he strode out.

IV

Left on his own, the Director put the chessboard aside and thought for a moment. Had he made mistakes? Was he still making them?

Well, obviously, mistakes had been made in the beginning. But how could they have been avoided, save by second sight?

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The Director liked to think on paper. He drew a pad toward him and wrote:

I still feel that though this is probably the most desperate and horrifying situation any group of people have ever faced, there must be a simple solution which we are missing.

He read through what he had written, tore it up and started again:

When we came, we set up a settlement by standard procedure. The ship was left in orbit, sealed and unmanned, and we all came down in the tenders. The air, though temporarily breathable, kills in twenty-four hours, so first we set up the Standard Poisonous Atmospheres Dome. Then we dismantled five of the tenders, sealed the sixth, and set up a standard colony within the SPAD.

The floor of the dome was soft earth. We have not yet found rock or stone on Procarpa. Perhaps that is the real cause of the trouble.

It was assumed, as it always is, that we'd use local material. We brought all we actually need, including food and prefabricated living accommodations. However, in the usual course of events a settlement such as this would gradually have been transformed by the use of local raw materials, wood, stone, rock or metal. Permanent buildings would be erected, the floor inside the dome would be paved, and so on.

But in our early days, all the work was done inside the dome, and only occasional scouting parties went out to explore. They found no rock in the vicinity, no living creatures except plants, and the trees of Procarpa are too small, thin and sappy to be of much use as a building material.

Then came the Fakers — and now we dare not send parties outside the dome. The last that were sent did not return.

Could Stevens be right? Was it all his fault? Definitely not, the Director decided firmly. When humans met an entirely unknown form of life, it might prove in the end that the best thing they could have done was shoot on sight. But that didn't mean they should always shoot on sight. Obviously not. He wrote:

After weeks of preliminary work we were utterly astonished when one day a man appeared — outside the dome. If he had worn a mask, if he had been humanoid, if he had even been significantly different from us, his appearance would not have caused such a sensation.

The startling thing was that as far as we could see he was exactly like us, and *wearing clothes the same as ours.*

We let him in, of course, since that was what he clearly wanted. Since he could breathe air we

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could not, we expected that our air would be poinsonous to him and that we would have to take him out again almost at once.

But he didn't seem to notice the difference.

At close quarters, he wasn't a man after all. He was merely a fair copy. And we guessed at once that the highest life form of Procarpa was capable of fantastic mimicry. He and his kind, unknown to us, had been watching us through the dome, and at least one had fashioned himself on us.

He could not talk. Apparently he had no heart, and he did not breathe. What appeared to be clothes were part of the creature himself.

Simple tests showed he had intelligence comparable to our own. He made no objection to examination.

He was a non-vertebrate protoplasmic mystery . . . his body turned out to consist of white flesh rather like that of some fish, but with the property of being soft or hard at will. We could not, of course, dissect or vivisect him without declaring war on his race — we presumed, rightly, that he was not unique.

To say that we were interested is an understatement. We had found the most adaptable form of life yet known, perhaps the most adaptable in the galaxy.

We were still more interested when we noticed, after he had been with us for a few hours, that he was now an exact copy of a human being — except that his clothes were still part of him. The change had been gradual. But now he had hair, instead of a dark area of flesh the color of hair. His eyes, his hands, his mouth, his nails, his nostrils were now like ours — and he was breathing.

We offered him food, and he ate it.

Then, as an experiment, one of the lab technicians stripped and showed him what a human body really looked like. At once he began to change. In an hour he was a perfect, naked, human male. What had looked like clothes were incorporated in him . . .

Well, what else could have been done, then? We were not, thought the Director, positively *not* wrong to do exactly as we did. We're supposed to be a research station, aren't we, a colony set up to find out about a chosen world?

The Procarpan was given clothes and shown how to put them on. He picked up things with uncanny rapidity . . . perhaps this was the first hint of warning.

We had been talking to him, of course, and by this time he was talking back. He had no difficulty in imitating human speech. Indeed, he did this so well that he answered every remark in an exact copy of the speaker's voice.

It was when a girl from the kitchen came to take away the

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dishes that he made his first direct request He had no difficulty in making himself clear. He had noticed that there were two types of human. He wanted the waitress to take off her clothes so that he could examine her.

It was funny, the Director thought, in view of the situation in the colony during the last month, what difficulty this caused at the time. The waitress was scandalized. The scientists, interested to see if the Procarpan would now turn himself into a woman given the necessary information, were all for the experiment. But the girl refused point-blank and stormed out.

The only women present at the time were a doctor and a physicist, neither youthful and both understandably modest. A call went out for volunteers, and several soon appeared. But they all proposed to go no further than to wear a bikini. The scientists explained patiently that this, in the circumstances, was no use. The volunteers said bikini or nothing, but they didn't mean this literally. In fact, they withdrew.

Eventually it was a young nurse, Terry Walter, who agreed. And it was the greatest mistake of her short life.

The Director wrote:

We were rather disappointed at the result, or rather lack of result. The Procarpan merely looked at the girl from all angles, touched her lightly once or twice, and appeared to have lost interest. And he stayed as he was.

The sequel came two hours later — and it was almost as startling as the Procarpan's first appearance.

A naked Terry Walter was seen outside the dome. She was admitted and given clothes. The real Terry Walter was summoned — and the two were more similar than identical twins. They spoke in the same voice . . . but there the resemblance broke down, since the real Terry knew everything she had always known, and the fake Terry knew only what the male Procarpan in the laboratory knew.

This was astonishing enough. The first Procarpan had not been outside the dome. Yet two hours after he saw Terry Walter, an exact copy appeared from outside.

Of course we saw the significance of this. The Procarpans were not only adaptable, they were telepaths. More than that, the fake Terry knew, had apparently heard and seen, all that the male Procarpan knew. And a simple test soon showed that whatever the fake Terry was told, he instantly knew.

The Director paused for a moment and then wrote reluctantly:

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To give him full credit. Dr. Arthur Stevens immediately advised caution. He came to me and pointed out that we were not merely entertaining two possibly dangerous aliens of unknown though obviously vast potential, but also their entire race. Every Procarpan — and there might be a dozen of them or millions — apparently had access to all that one of them experienced. Perhaps they were not really a race of individuals at all, but a single entity with individual members. And we were keeping practically nothing secret from them.

I told Stevens that we must find out all we possibly could about the Procarpans. We must continue teaching them our language so that they could tell us about themselves.

This they never did . . .

The Director looked for a long time at those last four words.

V

"Next, please," Stevens called.

And so it went on. An exhaustive test, and even then not necessarily a conclusive one, could take an hour. Average, say forty minutes. The team could scarcely work more than fourteen hours a day. That meant twenty-one tested a day. And there were three hundred nine colonists.

There had been a lot more. Originally there had been 371 colonists. Sixty-two had been possessed by Fakers, who had been detected and destroyed. Or rather, 62 had been destroyed, 59 of whom had been Fakers . . .

Jonina had come up with some thing this time. She gave the electrician who entered an ordinary wooden pencil, new, hexagonal, unsharpened.

The electrician, Saunders, said: "Where d'you get hold of that? Haven't seen one for years. Certainly never thought we'd brought any with us."

"I found a box of twelve," Jonina said, "and that's the only one out of it. We can be quite certain there isn't another in the dome."

Saunders was puzzled. "What about it? What do you want me to do with it?"

"Write your name."

"Huh?" Involuntarily he looked around.

"What are you looking for?"

"Well, I guess there isn't such a thing as a sharpener in the colony. I'll need a knife, a razor or something."

"Okay," Stevens said. "You can go."

Among the three of them who remained when he had left — the guards were instructed to act as much as possible like robots, doing and saying nothing but

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what they were told — the familiar excitement began to grow. Were they really on to something?

"Think it's definitive?" Jonina asked.

"We'll have a better idea when Anna gets back." As Stevens spoke, Anna came in.

"I couldn't find a picture or an explanation in the library," she said. "The encyclopedias don't mention pencils at all. The dictionary merely says 'old-fashioned form of stylus."

"So maybe it will work," Stevens said thoughtfully. He picked up the pencil. "A thing like this could beat the Fakers. We could have everybody in here in an hour or two . . . Jonina, run after Saunders and warn him under no circumstances to say a word about this test to anybody." Jonina left hurriedly.

"We could improve the test," Stevens went on.

"Not mention what the pencil is for?" Evans suggested. "Not even give a clue by asking people to write their name?"

"No, I guess we have to do that — a lot of our own people will need that slight clue to remind them what a pencil is. But with that, they'll know. There can't be anybody here who didn't use pencils as a kid. No, I was thinking of two other things. Anyone got a knife?"

Evans gave him a scalpel. "You're not going to sharpen it, surely? That would give the whole thing away . . . "

He broke off as he saw what Stevens was doing. In gold on the red pen were the words: BLUE STAR PENCIL CO. MADE IN JAPAN. HB. Stevens carefully cut out "pencil".

"No use letting them know what to look for," he said. "Anna, have you any red nail varnish?"

Anna rolled her eyes. "Men," she said succinctly. "I wonder why we bother . . . We're supposed to be getting married, and he's never noticed I don't use

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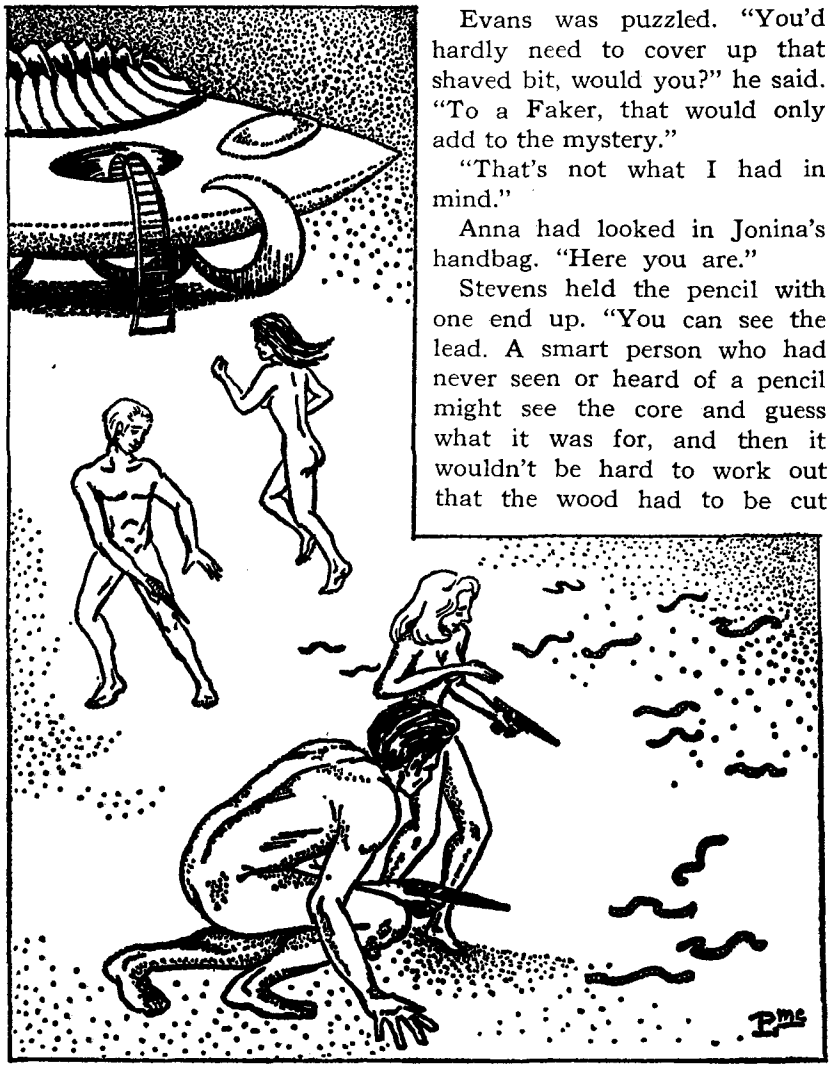
nail lacquer. Jonina uses it. Fingers and toes. And it's about that shade."

Evans was puzzled. "You'd hardly need to cover up that shaved bit, would you?" he said. "To a Faker, that would only add to the mystery."

"That's not what I had in mind."

Anna had looked in Jonina's handbag. "Here you are."

Stevens held the pencil with one end up. "You can see the lead. A smart person who had never seen or heard of a pencil might see the core and guess what it was for, and then it wouldn't be hard to work out that the wood had to be cut



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away to make a point. Let's make it a little more difficult, shall we?"

Carefully he lacquered the two ends of the pencil. When the lacquer dried there was no sign of the graphite.

"I really think we've got something," Evans said quietly. "How about a two-minute snap test, everybody in line, guards on the job, no talking?"

"Go ahead," Stevens said. "Get on the intercom."

"Are we telling the Director?"

"No. The fewer people who know what's going on the better." He frowned. "Jonina's taking her time . . . "

Jonina caught up with Saunders in the long corridor that linked the living quarters with the lab block. Since there were guards at each end, there was little or no danger here.

The white worms that could turn humans into Fakers were about eight inches long and slightly less than two inches thick. They were not, fortunately, tremendously mobile. Thus although when they did manage to strike they could penetrate the victim's skin in practically no time and take over completely within two or three seconds, anyone who saw them in time could escape. It was useless to stamp on them or grasp them — the worm always won such encounters. If you didn't have a gun you ran.

Fortunately, too, in their worm form the Fakers were not particularly adaptable. They could change color but not their shape to any great extent. It was assumed that the worm form was the irreducible Faker physical minimum, designed for possession, not adaptation.

The worms could penetrate most fabric as if it were not there, but metal completely defeated them and wood in good condition was nearly as effective a barrier, especially if it was painted.

So the labs and kitchens and living quarters, constantly patrolled by men and women with stun guns, were reasonably safe. Worms that did get in were almost certain to be seen and destroyed. And although they took chances and never in any circumstance left any person they had possessed, if indeed this was possible for them, the destruction of individual worms evidently did matter to them. The chances they took to possess humans were seldom suicidal.

The snags from the humans' angle were that all Fakers in human form carried in their bodies, undetectable, two or three worms capable of further conquests, and that in the dome

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it was impossible always to remain indoors. What had been brought and set up was, after all, only a skeleton settlement, incapable without building materials of some kind of modification, adaptation or expansion. Besides, three-quarters of the colonists were fully occupied one way or another in the fight to counter and contain the Fakers, and the rest were engaged in essential services. It might be possible, by total concentration, to halt possession by Fakers. But it wasn't possible to do that and everything else.

Saunders turned inquiringly as Jonina came up behind him.

"That test," Jonina said breathlessly. "You mustn't breathe a word about it to anybody. If anybody asks, you know nothing."

"Sure," said the electrician. Then his attention was caught. It wasn't surprising. Well-endowed at any time, Jonina, breathing deeply, made a remarkable spectacle.

"What's it worth not to tell?" Saunders murmured.

"Don't be crazy."

He put his arms round her and tried to kiss her. For a moment Jonina, who was not exactly inhibited, did not resist. Saunders was young and not unattractive, and what was a kiss between people who were not even friends?

Then suddenly she had a moment of purest terror.

Often this must be how it happened.

Nudity gave some sort of excuse for playfulness. You didn't have to be young. You didn't have to be of different sexes. Any time two people met in a non-public spot, a certain boisterous horseplay would seem anything but suspicious.

And then . . . two bodies pressed together, breast against breast, abdomen against abdomen . . . Even the second or two of resistance would be cloaked. A girl, a man held by strong arms would try to make a perfectly natural breakaway — while something passed from one body *through* another.

She reacted, violently. She used her knee, both hands, her head, an elbow. She made quite a mess of the playful technician. And in doing so she satisfied herself completely that it hadn't really been necessary.

Her terror dissolved. "You'll keep quiet," she said.

It would be some time before he could speak. "Well, I'm sorry," she said mildly, "but with this sort of thing going on, anyone who steps out of line deserves anything he gets."

She waited until he could walk,

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then left him. When he did get his breath back, he didn't speak. He would never be a friend of hers.

She started back to the clinic.

So that they could never tell us about themselves.

This they never did . . .

It was possible, the Director thought, that there was nothing to tell. The Fakers were 100% parasites, their life goal being to imitate. Perhaps they had no remembered history. Perhaps, with each new race they learned to imitate, the past was cancelled.

Well, he might as well bring the summary up to date.

The two imitation humans lived among us for weeks learning. Their powers of assimilation were remarkable. In no time they had vocabularies better than average, became quite indistinguishable from real humans, were even considered as humans.

We liked them. They soon knew everyone in the colony by name, talked with them, learned their history. They were the best listeners we had ever known.

The fake Terry Walter was particularly popular — though, as we learned afterwards, her extensive relations with the men in the colony were in the sexual sense innocent . . .

Our discovery of the next step in the Faker campaign was accidental. We might never have discovered what was happening at all, or only when it was far too late.

A friend of the real Terry came directly to me. She was puzzled. She and Terry had known each other for a long time. They had a strictly private word game of their own, one they had never shared with anyone.

Now suddenly Terry didn't any more.

We thought at first that the real and fake Terry were having some fun with us, as twins do. We brought them together.

We found that one of them, no matter how good a copy, could still be identified as a Procarpan. Blood and other samples removed from her responded exactly like human samples at first. But in a matter of minutes or hours they changed, attempting to turn into something else . . .

We realized the gravity of the situation. Both Procarpans were locked up. The creature who had been the real Terry was exhaustively questioned. It was beyond doubt that her body had been taken over somehow by the Procarpans.

And how many more?

That was when the testing started.

Well, how could anyone have guessed, the Director thought, that the Procarpans had two totally different techniques of

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imitation? Making themselves look like humans, even actually existing humans, had been relatively harmless. Anyway, there had been only two of them. The question of admitting to the dome five hundred Procarpans looking like humans had never arisen.

But finding that a human had become a Procarpan was a different matter.

We tried to restore Terry. We asked the Procarpan inside her to bring her back, to leave her. He, she or it merely went on with the stubborn, hopeless pretense of being Terry.

We tried drugs. We even tried torture. Nothing happened except that when the Faker realized that we were never going to stop, that Terry Walter, possessed, would never be free among us again, she decided to die.

She died. We could not stop her. Significantly, however, we noticed the typical green tinge after death which apparently is an infallible sign.

The two imitation humans died too.

But now we were alerted: how many other Fakers were already among us?

We started testing. *Then* it was easy. Friends asked questions which only the real person could answer. There were, we found, already four Fakers among us.

We tried to restore the victims, but apparently Fakers never let go — if they are capable of letting go. We don't know.

It must be admitted that though we saw the horror of the situation, it was some time before we saw the complete danger. The trouble was every Faker knew everything which had ever been said or done in the presence of any Faker, or the two imitation humans.

They *were* the people they seemed to be, and therefore no medical test worked. Somewhere in their body, as we now know, there was a white worm — but we have never found any way of establishing this short of execution . . .

But because at first it was so easy to spot Fakers, most of us assumed it would always be so.

We were wrong. It was not long before a male Faker could graphically describe a baseball game, demonstrate golf shots, tell off-color stories, and describe actual locations on Earth. Soon a girl Faker could react to clothes, perfume, obscenity, compliments exactly like a real girl.

For a time actual sexual intercourse was definitive — but only for a time. Pain worked briefly. So did tests based on creative sense of humor, for the Fakers could only imitate humor, not initiate it. Unfortunately, many humans are similar.

We soon found out about the worms. It was after that that I

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ordered total nudity all the time, after a plump woman Faker in blouse and slacks was found to be carrying seventeen worms on her body, to say nothing of any others that might have been *in* it.

Soon we reached a stage when we could test a suspect for an hour and not be sure. Everything which had worked before was known and rendered useless.

Skills were still beyond the Fakers. No Faker can play the piano — but they can sing and whistle, and they know all the tunes the average person knows, all the words.

Now we're in the position where we're not so much trying to beat the Fakers as beat ourselves — think of important, vital, significant, definitive things which, so far, we've missed . . .

The Director took a fresh sheet and wrote firmly:

My only mistake, the only one which can be held against me, was not ordering withdrawal from this world the last time I could be certain that every Faker among us had been detected.

Unless we find a storybook solution that totally nullifies the Fakers, Procarpa must certainly be abandoned. But obviously we cannot take this scourge with us. It could be the end of the human race; perhaps before this the Fakers have totally eradicated other races, here or elsewhere. Besides, from our own point of view, we should not wish to be imprisoned in a ship with such an enemy . . .

He had thought that through and made up his mind. It was possible that the problem could very easily be beaten on a ship. The Fakers might depend on a supply of worms and be incapable of quick procreation off Procarpa. Perhaps on a ship the problem would sink to negligible proportions.

But perhaps it wouldn't.

The Fakers apparently could learn nothing they hadn't been taught. And the settlers had been careful not to teach them about space travel.

It wasn't really a heroic, noble, selfless decision. If they couldn't get off Procarpa without Fakers among them, it obviously wasn't worth getting off Procarpa at all.

VI

"What kept you? What happened?" said Stevens as Jonina returned.

Her moment of terror, and the whole brief episode, was now quite unimportant. "Nothing," she said.

Evans had just finished arranging an immediate snap test of the entire personnel, except

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the Director, when the intercom buzzed. He came back to the group at the other end of the clinic, his face grave.

"That Black Beauty query," he said. "Nobody told anyone anything."

Stevens frowned. "That means that whoever told has been taken over already," he said. "Well . . . let's get started.

The organization for such a snap test had been worked out long ago. Everybody in the colony would be in the open, spaced out, watched by guards. There would be no talking. People tested and passed would go back to their places.

If the test worked and went on working — and those were big ifs — they would spot every Faker at present in the colony.

The first ten men and women knew at once what the red object was and knew it had to be sharpened. The eleventh was puzzled, and just as the six people in the room were becoming nearly certain she was a Faker, she suddenly realized: "Oh, it's a pencil."

The thirteenth turned the pencil over and over, tried to write with it, pressed the shaved spot in the hope that a stylus would pop out, felt for catches, tried to unscrew it. He acted exactly like any human being presented with a writing tool unfamiliar to him.

But Stevens had to back his judgment . . .

There was the usual tense period of waiting. The man on the floor might have died simply for the crime of not recognizing a pencil, never having used one as a child.

He hadn't. He was a Faker.

In their relief and excitement, the four testers hugged each other. Jonina (who had already forgotten all about Saunders) even hugged the two guards, who were usually completely ignored.

They had a test which worked. No Faker knew what to do with the pencil, and this time, owing to the precautions taken, there was no way for the Fakers to find out.

If any of the men and women armed and appointed as guards was a Faker, there could be a bloody gun battle — but this was unlikely, since the Fakers played their parts so perfectly that a Faker who was a guard would act like a guard up to the moment of discovery.

The testing went on.

The next Faker knew, of course, that it was no use pressing the shaved spot. He tried licking the pencil.

They didn't wait this time to make sure he was a Faker. They bundled the corpse into one of the cubicles and went on test-

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ing. But he was a Faker all right.

The next Faker demanded ink. Evidently the Fakers had decided by this time that the red stick was simply a very primitive pen, and they knew about ink.

He was shot too and pushed into a cubicle.

There were some near things with people who were not Fakers. One girl of seventeen, the youngest person in the colony — brought along because her mother, father and brother were there — seemed to have no idea what the red stick could be. Stevens would have given the signal to have her shot but for the fact that he knew her brother and parents were in the colony. If she had become a Faker, could they possibly have failed to spot it?

So they gave her every chance. Could it be that lead pencils were now so old-fashioned that the youngest people had never used, seen, or heard of them? Yet Jonina, who had thought of the test, was only eighteen.

Finally it clicked. The girl had seen sharpened pencils but did not know them in their unsharpened form. She did not know they could come that way.

Altogether, they spotted and killed seven Fakers.

The very last was a Faker; he had chosen to remain in this position so that he would have the very maximum chance of finding out something in time to save himself.

But all he had managed to figure out was that since the red stick did not write by itself, since it did not unscrew and evidently was not used with ink or paint, it must be an instrument which worked in conjunction with a special surface, like chalk on a blackboard or an etching needle on metal. He therefore asked for "the right paper" . . .

When they had confirmed that he had been a Faker, the tec team members were jubilant. They had not expected such success. For some time now all the most brilliant ideas had been countered.

"I must see the Director," Stevens said.

"To give him the test too?" Evans said meaningly.

"That as well. But mainly because now, if we take real emergency measures, we can beat the Fakers. Never let anybody out of the sight of at least three other people, even for an instant. Keep everybody squatting in the open if necessary. After all, we're under a dome."

He put a call through. "It's a breakthrough," he told the Director jubilantly. "We figured out a test . . . of course it won't work again, after today, but we

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know as of now there are no Fakers left in the colony. How about that, Director?"

There was a moment's pause. Then the Director's voice exploded on them: "Fool! Get over here right away." And the line went dead.

They looked at each other. "The Director?" said Evans. "Could he be — ?"

"No," said Stevens positively. "And if he were, he wouldn't step out of line by blaming us for catching Fakers."

"All the same," said Evans, "we'll all go with you, Steve."

They went to the Director's room. He had calmed down a little. He was disappointed now rather than angry.

First, however, Stevens gave him the pencil.

"Oh, that?" he said. "Did that work? The Fakers didn't know it had to be sharpened? Steve, we've missed a great chance. You should have told me you had something . . . Are you sure this won't work again?"

Stevens shrugged. "Pretty certain. The Fakers will take over somebody or other within hours. Now that the test is over and everybody's dispersed, the pencil probe will be freely discussed — a Faker could find out what he wanted to know without even asking directly."

"We've missed a great chance," the Director repeated gloomily. "This could have got us off the planet."

The team exchanged glances. "You're prepared to abandon the colony, then?" said Stevens.

"What choice is there? No one else would come here. We've found no natural resources anyway, and the atmosphere is poisonous. Colony Control wouldn't finance more than a base here, even without Fakers. As it is — I decided some time ago we must abandon the colony the moment we can be sure we're absolutely clean —"

"Then you might have told us," Evans said.

"It's up to you to tell *me* when you have — "

"Director, it's foolish to expect anyone to work in the dark," said Stevens bluntly. "Anyway, we know we're clean now. Why not — "

"No, it's useless," said the Director wearily. "We need at least two tenders to take everybody off. Even then people will be packed like sardines in conditions that can't be maintained for more than an hour or two. By the time we've rebuilt a second tender, there will be Fakers among us again."

"If we line up everybody and never let people even go to the bathroom except in sixes . . . " Stevens said.

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The Director shook his head impatiently. "A second tender can't be reassembled that way."

"Then why not do it in two trips? We know the ship is clean since the Fakers have no machines and wouldn't work ours anyway. Take a tested batch up and then test the second batch."

"I'm not going to withdraw until we can all withdraw," said the Director flatly.

Again the team exchanged glances. No one had more cause than they to know that the Director's handling of the whole situation had not been perfect. But he was the Director. Things had to be done his way. He was like the captain of a ship — in final command.

"Well, I guess it's no use arguing," said Stevens. "I take it you're going to have a second tender restored and then, when everything's ready, you want another definite test?"

"Another short test," the Director corrected. "If it takes half an hour per person, that's too long. That means seventy-five hours to load each tender, and we can't shut up one fifty people in a tender for more than a few hours . . . What I want is this. We rebuild a tender, get everything complete and then all line up. Before anybody has to eat or drink or sleep, before the Fakers have a chance to do anything entirely new, you get everybody positively cleared and into the two tenders. That means a quick test like the one you've just used. Hell, you've proved it's possible. Why can't you do it again?"

VII

As far as the team, back in the clinic, was concerned, this question was easy to ask but very difficult to answer.

They discussed the matter without the guards, though the guards were safe. A password system was employed. This worked perfectly on a small scale, in research teams and with a few trusted guards, but human nature prevented it from working in the colony at large. Such a system had been tried several times, and it had always broken down.

In any large group there were always some who *had* to tell . . .

Evans said: "Sure, when a simple little thing like the pencil test works, it suddenly looks for about five minutes as if this problem wouldn't give an average-grade moron much trouble. But the fact is we can test and test for days and let every Faker in the colony through the net."

"I think," Jonina remarked, "that the first thing to figure

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out is some nasty accident that might happen to the Director."

Stevens nodded. "I know what you mean."

"Do you?"

There was a strange quality in her voice that made them all look at her. She was tense as a high diver before a leap.

"We're the testers," she said meaningly. "Suppose we find the Director is a Faker?"

"But he isn't," said Stevens. "He's wrong, but he's no Faker."

"Does that make a difference?" Jonina said.

Then they saw exactly what she meant. They saw, too, why she made the suggestion while the guards were not present.

They had to kill Fakers. If they made mistakes, it was too bad. No one could hold them responsible, any more than a surgeon could be held responsible when the patient died.

"No," said Anna abruptly. "That wouldn't help. At the present moment, I guess the Director's right."

"Huh?" Evans exclaimed.

"Yes, right. If the final stage is anything but a quick all-or-nothing test, the Fakers have time to see what's happening and try something new."

"Such as?"

She shrugged. "With their abilities, do you think they couldn't figure out something — if they saw defeat staring them in the face?"

They didn't.

In five days the tender was ready. Every inch of it was tested during assembly, in case the Fakers could *be* metal and plastic as they could be human beings. (But if so, surely the battle was over and the Fakers had won?) When ready, it was sealed, like the other tender. There were no worms in either of them.

Routine tests had identified no new Fakers, and there might be none. But the work of reassembling the tender, and the consequent disorganization and strain on the remaining accommodations, meant opportunities which must, Stevens decided grimly, have resulted in the creation of at least six new Fakers.

The Director — and Anna — were right. It was impossible, on a long-term basis, to keep a colony under a dome running and have all the top brains engaged in a fight against the Fakers and at the same time ensure that nobody was ever alone or in twos or threes, anyway, in a standard settlement with only earth as raw material.

Talks went on every day on the final test. The Director sometimes attended, and the scientists working on the problem from other angles, were consulted.

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Generally it was agreed that something like the pencil test must be the answer. It had to be something that every human knew about, and no Faker. Therefore it had to be something which had no day-to-day part in the life of the colony and which would not have been discussed.

Following the success of the pencil test, filling and using a fountain pen was considered. Apart from the fact, however, that no pen could be found in the colony, the test was finally decided to be inadequate. Although one or two Fakers might not show sufficient familiarity with a pen, the third or fourth would have figured it all out.

There had never been a baby's bottle in the colony. But again, every test based on such an object seemed too easy.

No Faker, given combustibles, would know how to light a fire — at least, so it was assumed. Would every human? Could the team see the difference, in a practical test, between a human with only theoretical knowledge of lighting fires and a Faker with only theoretical knowledge of lighting fires?

Mechanical tests, earlier, had been very effective. The snag was that the Fakers, although they had never shown more than average mechanical aptitude, had become better at some of these tests than the least apt humans.

Earlier, too, tests based on the fact that the Fakers had no original sense of humor had worked. But many humans had no individual sense of humor either. They had learned to laugh at certain words, certain situations, certain behaviors. They laughed because others laughed. Given a test designed to grade their appreciation of the comic, they came out lower than the Fakers — who were better at imitation than any human.

Thousands of things were considered. Every possible test, even those constructed on impeccable principles, had a hole.

Every human had to pass. Every Faker had to fail.

A series of tests was postulated: tests of mechanical aptitude, sense of humor, selfconsciousness and other human characteristics and capacities. Yet suppose some rated like a Faker on all tests — did that prove he was a Faker?

Unfortunately, no.

The first idea came from Anna — and it was not a test.

She pointed out a mistake they had been making right from the beginning. An understandable but stupid mistake.

Always, the moment they were

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sure a suspect was a Faker, they executed him. Naturally, it was impossible to take chances once a Faker was discovered.

But this meant that the Fakers always knew the key question.

Suppose the pencil test had been included with others. Suppose no interest had been shown when a suspect failed to do anything with the pencil. Suppose he had been executed ten minutes later.

The Fakers would never have known their precise mistake.

So it was agreed that when the key question was found, Fakers would not be executed instantly. The team would wait, acting as casually as possible, until something else happened which might be a mistake. Thus the value of the test might be preserved.

On the fifth day Anna said: "Suppose we put the clock forward two months?"

It took the other three some time to work out what she meant.

Even then, her idea, like Jonina's, aroused no initial enthusiasm. It did not seem to be definitive. It did not call for positive enough reaction. There must be a great deal about it in the library. The subject must surely have been discussed freely in the colony, in the hearing of Fakers. Then, too, Fakers who failed the test early would pass on information which would enable later Fakers to pass.

Nevertheless, the four members of the team batted the idea around in their minds, did some checking in the library, and began to see how the plan might work.

The great virtue of the idea was the vast opportunity it gave Fakers to go wrong. Humans, with their background, their experience, their seventeen (at least) years of life, could scarcely get completely on the wrong track. Although they might not know certain things, they could not possibly make any positive mistakes.

It was not as simple as the pencil test. It would need equipment. It would need a specially prepared testing room, the contents of which must be kept secret. True, the second Faker would know all about them. But could he react correctly, even knowing?

Gradually they came to believe he could not.

"But," said Jonina glumly, "the Director will put his foot in it somehow."

"No, he won't," Stevens assured her.

"You know him — "

"This is how we'll work it. The Director, who won't know a thing

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about the test, will be tested first. He'll be first in the first ship."

The other three brightened.

"Then," Stevens went on, "the pilots, engineers, technicians. If anything happens, the two tenders can be sealed and take off — "

"Leaving us behind," Evans remarked quietly.

"Quite. But that shouldn't happen. We'll have Fred and Charlie with us. There shouldn't be more than a dozen Fakers among us in all. The rota will be random so that they can't be the last dozen, or anything like that. You know what the Fakers are like. They'll go on pretending, right to the end."

"We hope," said Evans. "Steve, will it really work?"

Stevens took a piece of paper from his pocket. "I took a leaf out of the Director's book and worked this out on paper," he said. "These are the reasons why I think Anna's test will work."

They read:

1. It is an essentially human thing.

2. Many reactions, many *human* reactions, are possible, but how could the Fakers guess any of them? (except those mentioned in books).

3. All humans have childhood memories of it. No Fakers have any knowledge of it at all, *save from adults.*

4. Fakers will know what Fakers have done in the test room, but not what any humans have done.

VIII

The day came.

The two tenders stood ready, inside the dome. When they took off, the dome would be destroyed.

This, they all believed, was important. Fakers found an intelligent community and imitated it. Possibly, once the humans had left they would go on pretending to be a human colony. And that might eventually be serious.

But with the dome destroyed, with everything within it destroyed — there would be an explosion triggered by the atmospheric pressure change soon after the dome went — the Procarpans would have neither cause nor opportunity to go on pretending to be humans.

Between the tenders was a small steel hut with no windows and a single door. Inside the hut were Stevens, Evans, Jonina and two guards. Outside were Anna and two more guards.

Around the hut and the tenders stood three hundred two people. There had never been a crowd quite like this. They were all quite naked, and they

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didn't make a sound. The guards among them had orders to shoot anyone who spoke.

Anna was amused to see that the Director was quite nervous. He wanted to speak to her, but the rules were strict. He too would be shot if he tried to communicate.

Inside, Stevens said: "Well, this is it. If the Fakers have found out what we're doing, if they manage to get through this test, we'll just have to beat them on the ship."

"But the Director said . . . " Jonina began.

Stevens smiled. "The Director is first in line. Once the seal is broken and he's in the tender, *we'll* decide what's to be done."

He nodded to the guard at the door, and the Director came in.

One by one, the Director first, men and women emerged from the testing room and walked to the tenders. They went to tenders A and B alternately, so that overcrowding would not be too serious until the end.

Fakers were spotted and, after a misleading period of pretense, executed.

No mistakes were made. No one who was not a Faker failed the test. And there was plenty of reason to believe that no one who was passed it.

Like the pencil test, it was working. They could see that. As in the pencil test, successive Fakers tried different things, and certain aspects of the testing had to be dropped once they knew the right answers.

But the Fakers could not learn enough to get through.

Gradually the crowd thinned. Anna was picking people for testing at random, so that the Fakers in the crowd could not determine the order of selection. If they could, they might give themselves a better chance of passing the test. They might, too, decide that the last half dozen or so should all be Fakers and take over guards and team.

The crowd dwindled to a hundred, then fifty, then twenty.

And suddenly Anna burst into the testing room. "Worms!" she screamed. "Hundreds of them!"

They rushed out.

All over the area within the dome, worms were oozing from the ground. The guards killed them as they came — but still they came. The remaining colonists leaped in a mad dance of survival. Two jumped the wrong way, were captured by worms, and were ruthlessly cut down.

Stevens shouted and one tender door closed. Another shout and the four members of the team, the guards, and eleven colonists still not tested dashed to the other tender.

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Within seconds they were off the surface of the planet.

The pilot protested. "Look, I'm in charge of this ship, not you," he said.

"In a few minutes you will be," said Stevens. "But you must realize that while eleven people are still untested, I have to be in charge. And I need the control room. It's the only space there is."

"You haven't seen the way we're crammed in this ship. People are literally piled on top of each other in the lockers, even in the machine room. Believe me, the Black Hole of Calcutta must have been a luxury hotel compared with this."

"The ventilation here is adequate," Stevens retorted. "Nobody will die. Now you fly the ship. I'm finishing the testing in here."

The team and the guards knew what to do.

The first of the last eleven entered. It was a girl, a very frightened girl.

"We've lost the props," Stevens said. "So we'll have to do this in words. Suppose I wore a green suit and boots, wore a green hood, and had a long white beard. Suppose I had white fur round the edges of the suit. Who would I be?"

She stared at him blankly. Patiently he described the garb again.

"Green?" she said.

"Green, or yellow."

"Not red?"

"Okay, suppose it was red."

"You'd be Santa Claus."

"Could I have another name?"

"Well . . . St. Nicholas?"

They began to relax, as they always did when they became sure they were testing a human, not in the presence of a Faker.

The Fakers did not know about St. Nicholas. But earlier, satisfied from other evidence — they did not ask questions in the same order — that the suspect was a Faker, they had killed him the moment he mentioned St. Nicholas. Since then no Faker had mentioned the name.

"Could I have still another name?" Stevens asked.

The girl was puzzled for a moment. Then she tried tentatively: "Father Christmas?"

They sent her to join the other humans packed like sardines.

"I don't get it," the pilot said. "On that, can you be sure?"

"It so happens," Stevens said, "that *Father Christmas* isn't mentioned in any of the reference books as the personification of Christmas. Santa Claus is, and so is St. Nicholas."

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"Seems a heck of a small thing to go on," the pilot commented.

"Maybe not so small . . . but we don't have to rely on that. There's lot's more. Funny, the mistletoe bit never worked at all. They knew all about that. The point of this thing is, it's the end of October and the colony didn't exist last Christmas. There hasn't been a lot of talk about Christmas in the colony, and there's no commercial campaign to keep reminding us how many shopping days there are till Christmas."

"But it must have been mentioned," said the pilot.

"Sure it's been mentioned — often. But there are no kids in the Colony. Christmas when it did come wasn't going to be anything much. There would be only token presents, no cards, no turkey, no snow. We'd have held a mild sort of celebration. Nobody was looking forward to Christmas particularly, because nothing much was going to happen. So why talk about it?"

"Well . . . " said the pilot.

"Now do you mind if we get on?"

The next suspect, also a girl, was asked: "What do you eat at Christmas?"

She told them, quite confidently. She knew all about Christmas. She had seen about twenty of them — well, say seventeen, since she wouldn't remember much about the first two or three.

And when she happened to mention pouring vodka over the pudding and setting it alight, Stevens passed her, although vodka was hardly traditional.

They had had two pieces of luck in the test. They had expected success with mistletoe (there was of course none in the colony), with various parts of the Christmas story, with snow, yule logs, reindeer, turkeys, crackers, punch bowls and all the other things particularly associated with the old-fashioned, traditional Christmas.

But of course chance operated. And somehow the Fakers had altogether missed hearing about Father Christmas. They could not know the Christmas family ritual, for who would describe in detail what everybody knew? Even pictures of Santa Claus were only in black and white . . .

Also, they had picked something up wrong. They had heard vaguely about burning brandy at an old-fashioned Christmas feast. But they didn't know it was poured over the pudding first.

A young man entered. He talked about Santa Claus, but not about Father Christmas. He knew all about adult Christ-

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masses, with paper hats and cocktails and mistletoe, but he was a little vague about the hanging-up-stockings ritual. He knew about burning brandy, but seemed to think it was poured into a small chalice and burned like, say, incense, as part of what was fundamentally a religious festival . . .

The body was pushed out into space.

He was the last Faker. There had been eleven in all . . .

Exhaustive tests on the ship convinced Stevens and the Director that there was not a Faker on board. They could be satisfied they were right, because, in space again, all the humans could be expected to know what to do in a spaceship and no Faker could.

The Director said: "Your test worked, Steve, and you can accept my assurance that you and Anna will get full credit. But honestly, wasn't the fact that it worked so well really luck? Couldn't it have failed utterly?"

"No," said Stevens, "it couldn't. There's a whole body of experience, and emotion, round a thing like Christmas. Sure, if one Faker had seen one genuine Christmas, the whole thing would have flopped. As it was, if some angles didn't work, others were bound to work. And they went on working because we never let the Fakers know where they'd gone wrong."

He didn't want to talk about it any more. It was over. Anna was waiting for him in the games room, and curiously, but understandably, she would be far more attractive in a halter and shorts than she had been without them . . .

"It had to work," he said, speaking the epitaph on the Fakers. "In an adult colony, two months before Christmas, how could anything the Fakers had heard enable them to guess what a child's Christmas on Earth is like? How could they talk convincingly of a child's feelings, even as a long-gone, distant thing? The bliss, the excitement of opening parcels on Christmas morning?"

He grinned. "And how could they possibly guess the truth — that Santa Claus is really your old man?"

— J. T. McINTOSH

★ ★ ★ ★ ★

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$40,000 First Year

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"I have done hotels, studios, restaurants and churches. That is where the big money is. Example: One Saturday, $210 in 11 hours. Monday, $116 in 6 hours. I have also contracted to clean 80,000 square feet of carpet for a store for $4,000."

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Let me give *you* the same start I gave these men!

In one way, the big earnings reported here might be called exceptional. In another way, there is nothing exceptional about them. That's because any man who will follow instructions and is willing to work at his own Duraclean business should be able to do as well under similar conditions.

Each of the men quoted here had talents and abilities different from those of all the rest. *But each had one thing in common*—a desire to win personal independence in a business of his own. And each man took five identical steps to reach his goal.

1. Each one read an announcement such as you are reading now. 2. He wrote for complete information. 3. He read the literature we sent him. 4. He gained new confidence in himself and the belief that he could succeed with Duraclean. 5. He accepted our offer to help him get started. Later, he wrote to tell us about his success.

In each case, remember, *the first step was to write to Duraclean for information.* If you would like to own a business of your own, why don't you do as these men did—*right now.*

When I hear from you, I will send you *facts* about the Duraclean Franchise that will open your eyes. You will see why a Franchise business such as ours makes success for the individual the rule rather than the exception.

The Duraclean home service business has been tried and tested. The market for Duraclean Service is tremendous—and growing. The methods that lead to success have been clearly charted. When an ambitious man follows these methods, success is the logical result.

Some Franchise businesses require investments as high as $50,000. With ours, you can get started for a few hundred dollars and we finance the balance. Monthly payments are so small that the profits on less than one day's service can cover your payment for the entire month. Even with this small investment and operating as a one man business, your potential is $250.00 a week net profit. With two men working for you 35 hours a week, you should gross a profit of $420.00. Allowing 20% for advertising and incidentals, the net would amount to $336.00.

The most important part of Duraclean home service is cleaning rugs, carpets and upholstered furniture by a revolutionary modern process known as the "Absorption Method." You do the work right in the customer's premises. No harsh scrubbing with motor-driven brushes. No soaking. Instead, an aerated foam loosens the dirt and holds it in suspension until removed. A test conducted by an impartial laboratory showed that the modern Absorption Method removed twice as much dirt as was removed by old fashioned machine scrubbing.

If you are tired of working for others or of jumping from one proposition to another—if you have a real yearning for independence in a business of your own—then send for "The Duraclean Route to Success." There is no obligation—no charge. No salesmen will call to high pressure you. Send for the book now. Read it. Then if you want to take the next step toward independence, you can write to me and let me give you the same help I've given so many other successful men.

Grant Mauk
President

DURACLEAN COMPANY
523D Duraclean Building, Deerfield, Ill. 60015

GRANT MAUK, *President*
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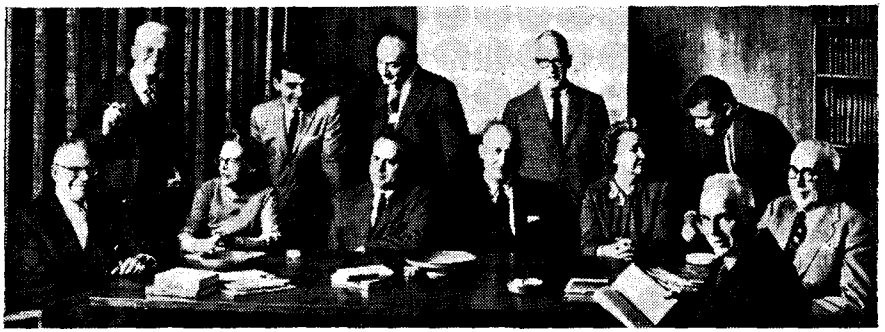

Seated: Bennett Cerf, Faith Baldwin, Bergen Evans, Bruce Catton, Mignon G. Eberhart, John Caples, J. D. Ratcliff. Standing: Mark Wiseman, Max Shulman, Rudolf Flesch, Red Smith, Rod Serling.

"We're looking for people who want to write"

By Gordon Carroll

Director, Famous Writers School. Former editor, *Reader's Digest, Time, Inc., Coronet*

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